

CHAPTER 18

ENVIRONMENTAL LAW

Important Concepts

1. The law concerning surface-water rights in the United States is based on the Riparian Doctrine and the Doctrine of Prior Appropriation. The *Riparian Doctrine* states that all landowners bordering a body of water have equal rights to it. The *Doctrine of Prior Appropriation* states that whoever is the first to use a body of water has top priority rights to it. The Riparian Doctrine is the basis for assigning surface-water rights in the eastern United States; the Doctrine of Prior Appropriation is more commonly applied in the western states.
2. The law concerning ground water rights is based on the *English Rule*, or “Rule of Capture,” and the *American Rule*, or “Rule of Reasonable Use.” The English Rule gives property owners the right to all the ground water they can extract from beneath their own land. The American Rule limits a property owner’s ground water use to beneficial use in connection with the land above. Disputes arise over what is considered to be “beneficial use.”
3. The acquisition of mineral rights in the United States is essentially governed by the ancient *Mining Law of 1872*, which was intended to encourage the exploitation of mineral resources by granting mineral rights (and land rights, too) at throwaway prices and without requiring any environmental protection. Subsequent laws, such as the *Mineral Leasing Act for Acquired Lands of 1947* and the *Surface Mining Control and Reclamation Act of 1977* (for coal only) limited the rights of exploitation and provided for the restoration of mined lands.
4. Many years of negotiations under the auspices of the United Nations resulted, in 1982, in the *Law of the Sea Treaty* to address the question of marine mineral rights. Some important provisions of the treaty are the extension of territorial waters to a twelve-mile limit, the recognition of *Exclusive Economic Zones* (EEZs) extending 200 miles from the shorelines of coastal nations, and the establishment of an *International Seabed Authority* that oversees the exploitation of marine mineral resources outside EEZs. The United States voted against the treaty but has tended to abide by most of its provisions.
5. Possible future resource development activities in the Antarctic will be governed by the *Regulation of Antarctic Mineral Resources Activities* (CRAMRA), which requires the unanimous consent of a multinational supervisory commission.
6. Numerous laws have been enacted by the U.S. Congress to deal with the problems of water and air pollution, waste disposal, and other environmental concerns. Some important examples are the *Clean Air Act of 1963* (and later amendments), the *Resource Conservation and Recovery Act of 1976*, the *Toxic Substances Control Act of 1976*, and the *Clean Water Act of 1977* (and later amendments). The U.S. Environmental Protection Agency, which was created in 1970, is charged with the establishment and enforcement of air- and water-quality standards; however, enforcement of antipollution regulations remains a problem.
7. Concerns over worldwide environmental issues have increased international initiatives, such as the *UN Convention to Combat Desertification* and the *UN Framework Convention on Climate Change*, to address global environmental problems.
8. A wide variety of environmental laws have been enacted relating to geologic hazards. While many of these laws have minimized the damage from geologic hazards, a common weakness is that they characteristically apply only to new structures, leaving existing structures at risk.

9. Both the U.S. *National Environmental Policy Act of 1969* (NEPA) and Canada's *Environmental Assessment Act of 1995* (CEAA) make environmental protection a national priority. Important provisions of the NEPA include the creation of the Council on Environmental Quality and the establishment of the environmental impact statement (EIS) procedure for evaluating the impacts of proposed actions that can significantly affect the quality of the human environment.

Key Terms

Doctrine of Prior Appropriation
environmental impact statement
Environmental Protection Agency
English Rule (Rule of Capture)
Exclusive Economic Zone (EEZ)
flood insurance

Kyoto Protocol of 1997
Law of the Sea Treaty
Precautionary Principle
Riparian Doctrine
Rule of Reasonable Use
Superfund

Multiple Choice

1. The principal approach to assigning surface-water rights in the eastern United States is based on the
 - a. Doctrine of Prior Appropriation.
 - b. Riparian Doctrine.
 - c. owner takes all principle.
 - d. first use, first priority principle.
2. A state where the "California Doctrine" is applied to surface-water rights is
 - a. Arizona.
 - b. New York.
 - c. Texas.
 - d. Idaho.
3. The English Rule or "Rule of Capture"
 - a. gives property owners the right to sell all the ground water they can extract from under their own land.
 - b. limits a property owner's ground water use to beneficial use in connection with the land above.
 - c. requires a property owner to replace all of the ground water extracted from under his or her neighbor's land.
 - d. states that property owners do not have the right to extract ground water from under their neighbor's land.
4. Which of the following statements is false concerning the 1872 Mining Law?
 - a. Mining companies were not required to inform the federal government of the locations of the deposits they were mining.
 - b. Mining companies were required to pay royalties on the materials mined to the federal government to help pay for the enforcement of the legislation.
 - c. The style of mining was not regulated by the federal government.
 - d. There were no provisions for reclamation or restoration of the mined land.

5. The Surface Mining Control and Reclamation Act of 1977 applies
 - a. only to the mining of iron.
 - b. only to the mining of copper.
 - c. only to the surface mining and deep mining of coal.
 - d. to all mineral resources.

6. The federal government owns over 50% of the land in which of the following states?
 - a. Texas
 - b. New Mexico
 - c. Wyoming
 - d. Utah

7. The Law of the Sea Treaty extended territorial waters of coastal nations to a
 - a. 3-mile limit.
 - b. 12-mile limit.
 - c. 100-mile limit.
 - d. 200-mile limit.

8. Which of these possible mineral resources is not associated with the Pacific continental shelf of the United States?
 - a. manganese nodules
 - b. gold
 - c. chromite
 - d. titanium

9. The 1961 Antarctic treaty failed to address the question of
 - a. nuclear-waste disposal.
 - b. territorial claims.
 - c. preservation of Antarctic flora and fauna.
 - d. mineral resources.

10. The Antarctic Protection Act of 1990
 - a. protects the Antarctic flora and fauna.
 - b. establishes guidelines for mineral-resource development in Antarctica.
 - c. sets the maximum allowable levels for Antarctic air and water pollution.
 - d. prohibits Antarctic mineral prospecting and development by United States citizens and companies.

11. The federal law that first banned the dumping or discharge of wastes into any body of navigable water in the United States was the
 - a. Refuse Act of 1899.
 - b. Federal Water Pollution Control Act of 1956.
 - c. National Environmental Policy Act of 1969.
 - d. Water Quality Improvement Act of 1970.

12. The federal agency that is directed to establish water-quality criteria for various types of water use and to monitor compliance with water-quality standards is the
 - a. United States Geological Survey.
 - b. Council on Environmental Quality.
 - c. United States Army Corps of Engineers.
 - d. Environmental Protection Agency.

13. The Clean Air Act Amendments (CAAA) make provisions for
 - a. allowing the EPA to impose stiff penalties for violations of CAAA.
 - b. further reductions of vehicle emissions.
 - c. reduction of SO₂ emissions in power plants.
 - d. All of the above are correct.

14. Which of the following laws was the first to include provisions for the handling of hazardous waste?
 - a. Solid Waste Disposal Act of 1965
 - b. National Environmental Policy Act of 1969
 - c. Resource Conservation and Recovery Act of 1976
 - d. Toxic Substances Control Act of 1976

15. The precautionary principle is used to
 - a. restrain certain actions that might result in irreversible damage to the global environment.
 - b. determine the amount of ground water in a given aquifer prior to extraction for use by industry or agriculture.
 - c. specify in advance the best available technology to be used to monitor the environmental consequences of a particular action.
 - d. ensure compliance with NEPA provisions.

16. President Ronald Reagan's Executive Order 12291 in 1981 decreed that
 - a. the U. S. Exclusive Economic Zone extends 200 miles offshore.
 - b. generators of toxic wastes must use the best available technology to treat their wastes.
 - c. a pollution-control regulation may be put forth only if its potential benefits outweigh its potential costs.
 - d. all construction projects funded in total or in part by the federal government must submit an environmental impact statement.

17. Legislation to restrict public and/or private vegetation that affects solar access has been enacted in
 - a. Oregon.
 - b. California.
 - c. Texas.
 - d. Nevada.

18. A common problem associated with geologic-hazard mitigation laws is
 - a. lack of scientific information on which to base sensible regulations.
 - b. wording that fails to specify fully what actions must be done and by whom.
 - c. provisions that apply typically to new structures and not existing ones.
 - d. All of the above are correct.

19. An environmental impact statement should include
 - a. a description of the proposed action, its purpose, and why it is needed.
 - b. a discussion of various alternatives.
 - c. an indication of the anticipated environmental consequences of the action.
 - d. All of the above are correct.

20. The method chosen to transport oil from Alaska's North Slope to refineries in the continental United States involved
 - a. a combination of pipeline, rail, and highway transportation.
 - b. pipelines across Alaska and subsequent tanker transport.
 - c. only direct tanker transport.
 - d. only pipeline transport across Alaska and Canada.

Fill In the Blanks

1. The term _____ is derived from the Latin word for “bank,” as in riverbank.
2. The _____ _____ is that principle of surface-water law that gives all landowners bordering a body of water equal rights to it.
3. The Doctrine of _____ _____ is that principle of surface-water law by which whoever is first to use water from a given body of surface water has top-priority rights to that water.
4. States subscribing to the “_____ _____” try to combine both the Riparian Doctrine and the Doctrine of Prior Appropriation concerning issues of water rights.
5. The _____ _____, or “Rule of Capture,” gives property owners the right to all the ground water they can extract from beneath their own land.
6. The _____ _____, or “Rule of Reasonable Use,” puts forth the idea that one person’s water use should not be so great that it deprives neighboring property owners of water.
7. In some states, landowners whose properties overlie the same body of ground water have _____ rights specifying that each landowner is entitled to a share of the water that is proportional to the individual landowner’s share of the overlying land.
8. An _____ _____ _____ is a zone extending up to 200 miles from the shoreline of a nation’s coast within which that nation has exclusive rights to mineral-resource exploitation.
9. _____ are violations of individual personal or property rights that are punishable under civil law.
10. An _____ _____ _____ is an analysis of the environmental impacts expected to occur as a result of a proposed action and its alternatives.

True or False

Indicate whether the following statements are true or false. If false, correct the statement to make it true.

- _____ 1. The prevailing principle of surface-water rights in the western United States is the Doctrine of Prior Appropriation.
- _____ 2. Most of the federally owned land in the United States is in the west.
- _____ 3. The United States was one of only four nations to vote for the Law of the Sea Treaty.
- _____ 4. The ownership of Antarctica has been divided among the twenty nations that have been designated “consultative parties” to the Antarctic treaty.

- _____ 5. The Environmental Protection Agency has been given the authority to require toxicity testing of all chemicals entering the environment and to regulate them as necessary.

- _____ 6. An unfortunate side effect of the availability of subsidized flood insurance has been to encourage development in flood-prone areas.

- _____ 7. The Department of Defense and the Nuclear Regulatory Commission were among the most frequent defendants in environmental impact statement lawsuits every year from 1975 to 1985.

- _____ 8. The NEPA requires that every EIS be prepared by an impartial, outside party rather than by the government agency, individual, or corporation that plans to carry out the proposed action.

Matching

Match each of the following environmental laws with its correct description.

- | | |
|---|---|
| ___ 1. Clean Water Act of 1977 | a. includes provisions for assisting state and local governments in developing solid-waste management plans |
| ___ 2. Clean Air Act of 1963 | b. nominally required all municipal sewage-treatment facilities to undertake secondary treatment by 1983 |
| ___ 3. Air Quality Act of 1965 | c. gave EPA the authority to regulate all chemical substances entering the environment |
| ___ 4. Solid Waste Disposal Act of 1965 | d. California law that created improved construction standards for school buildings |
| ___ 5. Resources Conservation and Recovery Act of 1976 | e. provided for federally subsidized flood insurance for property owners in identified flood-hazard areas |
| ___ 6. Field Act | f. created the Council on Environmental Quality in the Executive Office of the President |
| ___ 7. Federal Flood Disaster Protection Act | g. required that the approximate surface topography be restored after the surface-mining of coal |
| ___ 8. National Environmental Policy Act | h. empowered federal agencies to undertake air pollution control efforts |
| ___ 9. Surface Mining Control and Reclamation Act of 1977 | i. intended mainly to help state and local governments to dispose of municipal solid wastes |
| ___ 10. Toxic Substances Control Act of 1976 | j. required the establishment of air-quality standards to be based on the known harmful effects of various air pollutants |

Review Questions

1. Explain the difference between the Riparian Doctrine and the Doctrine of Prior Appropriation as they apply to the surface water in the United States.
2. Why are groundwater rights inherently more difficult to define than surface-water rights?
3. What is the essence of the 1872 Mining Law? Do you think that this law should be amended and, if so, how? Justify your answer.
4. Explain the concept of exclusive economic zones. What is the status of mineral rights beyond the exclusive economic zones?
5. What are the main monitoring and enforcement responsibilities of the U.S. Environmental Protection Agency (EPA) in the areas of water pollution, air pollution, and waste disposal?
6. Discuss the difficulties of defining and achieving “zero pollution discharge.”
7. Discuss the proposal favored by most nations that participated in the Kyoto Protocol of 1997. Why has the United States government decided not to honor the protocol in its current form?
8. Describe briefly the important laws related to geologic hazards. Do you think they adequately address the problems that commonly arise as a result of geologic hazards?
9. Suppose you are a U.S. senator who is an ardent advocate of environmental protection. What additional laws would you like to propose for the protection of our environment?

Surfing the Net

A review of the United States Codes pertaining to environmental laws and other topics of environmental law information (Legal Information Institute, Cornell Law School):
<<http://www.law.cornell.edu/topics/environmental.html>>

Environmental law links to all known U.S. government sites (FindLaw):
<http://www.findlaw.com/01topics/13environmental/gov_laws.html>

CHAPTER 18 ANSWER KEY

Multiple Choice

- | | | | |
|--------------------|--------------------|-------|-------|
| 1. b | 6. d (figure 18.3) | 11. a | 16. c |
| 2. c (figure 18.1) | 7. b | 12. d | 17. b |
| 3. a | 8. a (figure 18.5) | 13. d | 18. d |
| 4. b | 9. d | 14. c | 19. d |
| 5. c | 10. d | 15. a | 20. b |

Fill In the Blanks

- | | |
|------------------------|------------------------------------|
| 1. riparian | 6. American Rule |
| 2. Riparian Doctrine | 7. correlative |
| 3. Prior Appropriation | 8. Exclusive Economic Zone |
| 4. California Doctrine | 9. Torts |
| 5. English Rule | 10. environmental impact statement |

True or False

1. True
2. True
3. False. The United States was one of only four nations to vote against the Law of the Sea Treaty.
4. False. No nation owns any part of Antarctica. All territorial claims were set aside under the provisions of the Antarctic treaty.
5. True
6. True
7. False. The Department of the Interior and the Department of Transportation were among the most frequent defendants in EIS lawsuits every year from 1975 to 1985.
8. False. The NEPA does not require that every EIS be prepared by an outside, impartial party not directly involved with the proposed action. Questions of lack of impartiality arise when government agencies, individuals, or corporations prepare an EIS for an action they wish to see approved.

Matching

- 1 b 2. h 3. j 4. i 5. a 6. d 7. e 8. f 9. g 10. c