

Appendix D

Laws and Treaties

On recent AP Environmental Science examinations, students were asked to:

- Identify two federal laws that might be used to save a bird or its habitat.
- Identify a U.S., federal, or international treaty to prevent the extinction of animals.
- State two specific provisions of the Clean Water Act.
- Propose two incentives to switch to electric cars.
- Discuss the law that requires monitoring of treated sewage discharged into a river.

This appendix provides basic information on key environmental laws and treaties that protect ecosystems, wildlife, and human health. There are many other laws and treaties, both in the United States and worldwide, but this list describes the most common—those most likely to appear on the AP Environmental Science exam.

Laws are formal rules of conduct that people, businesses, or even government agencies must follow; they are enforced by designated authorities. Laws are created and enforced at the local, state, or federal level. Federal laws are passed by Congress and administered and enforced by specific government agencies. Laws may be periodically amended.

Regulations are the detailed rules and procedures necessary to enforce a law, commonly established by the agency designated to administer the law. Most federal environmental laws are administered and enforced by the Environmental Protection Agency (EPA), with some being administered by other U.S. government agencies. The laws included in this section that are not regulated through the EPA are noted.

Treaties are formal agreements between international participants. They are also known as protocols, conventions, agreements, and covenants.

United States Federal Laws

Alaska National Interest Lands Conservation Act (1980): Provided for the creation or revision of 15 National Park properties and set aside other public lands for the U.S. Forest Service and the U.S. Fish and Wildlife Service. This act is administered by the Department of the Interior.

Clean Air Act (CAA) (1970): Regulates emissions from both mobile and stationary sources, as well as hazardous emissions; establishes National Ambient Air Quality Standards (NAAQS) to protect human health.

Clean Water Act (CWA) (1972): Regulates the discharge of pollutants into waterways and establishes quality standards for surface waters, including industry wastewater standards.

Coastal Zone Management Act (1972): Allows for the protection of United States coastal zones from environmentally harmful overdevelopment. Federal monies are given to participating coastal states to be used to conserve coastal areas.

Comprehensive Response Compensation and Liability Act (CERCLA) (1980): Provides for federal money to be used for the cleanup of hazardous waste sites, including accidents and spills. If a responsible party can be identified, the EPA has the power to hold the party responsible for remediation. If a responsible party cannot be identified or if the responsibility party is unable to pay for cleanup, "Superfund" monies will pay for the remediation of the hazardous waste site. This act is commonly known as "Superfund."

Emergency Planning and Community Right-to-Know Act (EPCRA) (1986): Protects communities from the harmful effects of hazardous chemicals. It requires companies to disclose information about toxic substances that they are emitting into water, air, and land sources. This act also mandates that each state establish a State Emergency Response Commission (SERC).

Endangered Species Act (ESA) (1973): Protects threatened and endangered species and their habitats. The U.S. Fish and Wildlife Service (FWS) and the U.S. National Oceanic and Atmospheric Administration (NOAA) are the organizations responsible for enforcing the ESA, with the FWS in charge of maintaining a global endangered species list.

Energy Policy Act (EPA) (2005): Creates standards governing energy production in the United States, including energy efficiency, electricity, energy tax incentives, climate change technology, renewable energy, oil, coal, gas, nuclear energy, hydrogen power, hydropower, geothermal energy, and vehicles and motor fuels.

Farm Bill: See Federal Agricultural Improvement and Reform Act.

Federal Agricultural Improvement and Reform Act (Freedom to Farm Act) (1996): Addresses farm conservation and wetland protection; makes loans available in some situations for particular crops; improves the production of milk, peanuts, and sugar; and created a commission to review past and current agricultural production practices. This law is administered by the U.S. Department of Agriculture.

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (1996): Regulates pesticide sale, distribution, and use. Pesticides must be reviewed and registered prior to use in the United States. If at any time a pesticide is found to cause harm, the registration can be canceled, thereby banning the use of the pesticide.

Federal Land Policy and Management Act (1976): Protects, manages, develops, and enhances public lands. It governs the use of public lands by protecting historic, scenic, scientific, and ecologically important areas. This law is administered by the Bureau of Land Management.

Fish and Wildlife Act (1956): Establishes a comprehensive fish, shellfish, and wildlife resource policy with an emphasis on the commercial fishing industry. This is administered by the Department of the Interior.

Fisheries Conservation and Management Act (1976): Allows for the management and control of U.S. marine fishery populations, with the goals of maintaining and restoring population levels to healthy numbers and avoiding overharvesting. This law is also known as the **Magnuson-Stevens Act**.

Food Quality Protection Act (1996): Aids protection of public health by setting and maintaining strict food safety standards. It safeguards infants and children from pesticide exposure in food, water, and indoor sources. This law overhauled the Federal Food, Drug, and Cosmetic Act and the Federal Insecticide, Fungicide, and Rodenticide Act.

Food Securities Act—Swampbuster Provision (1985): Discourages the alteration of wetlands for the use of agriculture. Farmers who fill in or alter a wetland are not eligible for farm program benefits. This is administered through the Department of Agriculture.

Fur Seal Act (1966): Prohibits the taking of fur seals on U.S. lands except by indigenous peoples who live in the Pacific Northwest. It is administered by the Department of the Interior.

General Mining Act (1872): Gives people the right to prospect and mine on federal lands, with the exception of those protected from human impact (for example, National Parks). Originally it was used as a way to promote the settling of unused land. This law is administered by the Bureau of Land Management.

Homestead Act (1862): Provided for the transfer of up to 160 acres of undeveloped federal land to an individual who lived on the parcel of land for five years or more and cultivated the land throughout this time. Homesteading was ended with the Federal Land Policy and Management Act of 1976.

Lacey Act (1900): First passed to protect game species and wild birds and has since been expanded to include all plants and animals. The act prohibits the trade in wildlife, fish, and plants that have been illegally taken, possessed, transported, or sold. It is administered through the Departments of the Interior, Commerce, and Agriculture.

Marine Mammal Protection Act (1972): Seeks to protect whales, dolphins, sea lions, seals, manatees, and other species of marine mammals, many of which remain threatened or endangered. The law requires wildlife agencies to review any activity—for example, the use of underwater explosives or high-intensity active sonar—that has the potential to “harass” or kill these animals in the wild. The law is our nation’s leading instrument for the conservation of these species and is an international model for such laws.

Marine Protection, Research, and Sanctuaries Act (MPRSA) (1988): Also known as the **Ocean Dumping Act**, prohibits the dumping of anything into the oceans, either transported from the United States or transported into U.S. waters, without a permit. A permit is issued only when it has been determined that the permitted activity will not overly degrade or endanger the marine community.

Migratory Bird Treaty Act (1918): Makes it unlawful to pursue, hunt, take, capture, kill, or sell birds that are listed as migratory. This includes live and dead birds as well as bird parts including feathers, eggs, and nests. Over 800 species are currently on the list. This act is administered by the Department of the Interior.

Multiple Use–Sustained Yield Act (1960): Governs the administration of renewable resources including timber, range, water, recreation, and wildlife on National Forest lands, taking into account the needs of multiple user groups. This act is administered by the Department of Agriculture.

National Environmental Policy Act (NEPA) (1969): Broadly covers environmental protection by requiring that proper consideration be given to the environment when federal actions are undertaken. Included in this requirement is the creation of environmental impact statements (EISs) and environmental assessments (EAs) prior to any government project that may have environmental implications.

National Forest Management Act (1976): Directs every national forest to have a resource management plan, which must be based on sustainable yields and multiple-use guidelines. This law is administered by the U.S. Department of Agriculture.

National Park Service Organic Act (1916): Also called the **National Park Service Act**, it was created to manage the parks that existed at that time. The National Park Service Department is under the direction of the Department of the Interior. Today, the number of national parks has grown to 58. In addition, the National Park Service manages other units including historical monuments, national seashores, historical buildings, and national recreation areas.

National Wildlife Refuge System Act (1966): Governs the administration and management of all the areas in the wildlife refuge system, including the protection and conservation of fish and wildlife that are threatened with extinction. This law has been amended by the National Wildlife Refuge System Improvement Act of 1997 and is administered by the Department of the Interior.

National Wildlife Refuge System Improvement Act (1997): An addition to the 1966 act, it ensures that the national Wildlife Refuge System is managed as a national system of lands and waters and is in the interest of the protection and conservation of the nation’s wildlife resources.

Noise Control Act (1972): Works toward reducing and eliminating noise pollution that poses a threat to human health and welfare.

Nonindigenous Aquatic Nuisance Prevention and Control Act (1990): Establishes rules and regulations to prevent the introduction and spread of introduced aquatic nuisance species, as well as the brown tree snake. This is administered by the Department of Agriculture.

Ocean Dumping Act: See the Marine Protection, Research, and Sanctuaries Act (MPRSA).

Oil Pollution Act (OPA) (1990): Addresses the prevention of and response to catastrophic oil spills, including a tax on oil used to clean up spills when the responsible party is incapable or unwilling to do so. It also requires that oil companies submit plans to the government outlining how oil storage facilities and vessels will respond to an accident if one should occur, and establishes regulations for aboveground storage facilities and oil tankers. The development of an Area Contingency Plan is also required. This plan explains the preparation and planning for oil spill response on a regional scale.

Oil Pollution Prevention Act (OPP) (1990): Mandates that facilities with oil or fuel storage capacity greater than 1,320 gallons create spill prevention, control, and countermeasures (SPCC) plans.

Pollution Prevention Act (PPA) (1990): Examines the efficient reduction of pollution through changes in production, operation, and the use of raw materials. The goal is to address pollution issues at the source prior to production, as opposed to monitoring waste or pollution emitted from the source after production.

Public Rangelands Improvement Act (1978): Balances the management of public rangelands for sustainable use and productivity. It also sets a fair and equitable fee for the use of this land and protects populations of wild burros and horses. This law is administered by the Bureau of Land Management and the U.S. Forest Service.

Resource Conservation and Recovery Act (RCRA) (1976): Controls hazardous waste throughout its entire life cycle, including generation, transportation, treatment, storage, and disposal. RCRA also manages nonhazardous solid waste.

Rivers and Harbors Act (1899): Requires Congressional approval before building a dam, bridge, pier, wharf, jetty, or dike in or over a waterway. It also specifies that a waterway cannot be filled, excavated, or altered without federal approval. This act is administered by the U.S. Army Corps of Engineers.

Safe Drinking Water Act (SDWA) (1974): Serves to protect drinking water sources, both above and below ground. Minimum standards are set for drinking water quality.

Soil Conservation Act (1935): Established the Soil Conservation Service (SCS) to address soil erosion issues and preserve natural resources. This law is administered by the U.S. Department of Agriculture.

Superfund Amendments and Reauthorization Act (SARA) (1986): Reauthorized cleanup activities of hazardous waste sites through the Comprehensive Response Compensation and Liability Act (CERCLA). This includes amendments, clarification of definitions, and technical requirements to CERCLA and also authorized the Emergency Planning and Community Right-to-Know Act (EPCRA).

Surface Mine Control and Reclamation Act (SMCRA) (1977): Regulates coal-mining activities to protect both humans and environments. It also governs the restoration of abandoned mining locations.

Taylor Grazing Act (1934): Established to protect public lands from overgrazing. This was later replaced by the Federal Land Policy and Management Act.

Toxic Substances Control Act (TSCA) (1976): Establishes requirements for the reporting, recording, and testing of chemical substances, as well as restrictions on these substances. This includes the production, importation, use, and disposal of specific harmful chemical substances such as radon, lead-based products, asbestos, and PCBs (polychlorinated biphenyls). Some substances are not included under the TSCA, including pesticides, food, drugs, and cosmetics, as they are regulated under specific laws.

Wilderness Act (1964): Established the National Wilderness Preservation System with the goal of preserving federally owned land for present and future use. This law is administered by the Bureau of Land Management and the U.S. Forest Service.

International Treaties

Agenda 21 (1992): A program run by the United Nations (UN) to help promote sustainable development by offering action recommendations to be taken globally, nationally, and locally by UN organizations, governments, and major groups that impact the environment.

Agreement on Port State Measures to Prevent, Deter, and Eliminate Illegal, Unreported, and Unregulated Fishing (2009): Attempts to prevent illegally caught fish from entering international markets. Permission to dock is required for foreign vessels, regular inspections are conducted by participating countries, and a network has been created for the sharing of information.

Antarctic Treaty System (ATS) (1961): Established to encourage cooperative research and exploration of the Antarctic while also banning any military activity there. The sharing of research information is encouraged as well as protecting the environment and marine organisms.

Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (1992): Controls the transport of hazardous waste between nations, and particularly the transfer of waste from developed to less developed countries. It also focuses on management practices and the reduction of toxicity of waste through monitoring of storage, transfer, reuse, recycling, and disposal of hazardous waste.

Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR) (1982): Established to conserve marine life and ecosystems in and close to Antarctica. It does not ban fishing in the included waters, but supports sustainable harvesting. It is part of the Antarctic Treaty System.

Convention on Biological Diversity (CBD) (1993): Created to protect and maintain biodiversity, including the sustainable use of resources and the sharing of newly developed genetic resources.

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (1963 and 1973): Bans the international transportation of animal products taken from endangered species. The treaty ensures that the international trade in wild animals and plants does not threaten their survival. It currently provides protection to more than 33,000 species.

Convention on Long-Range Transboundary Air Pollution (CLRTAP) (1979): Aims to limit and reduce air pollution with the long-term goal of eliminating it completely. It also includes transboundary pollution that travels extended distances. Strategies are developed to reduce air pollution through collaboration and the sharing of information.

Convention on the Conservation of Migratory Species of Wild Animals (CMS or Bonn Convention) (1979): Aims to regulate and conserve migratory species, including avian, marine, and terrestrial organisms that cross national boundaries, protecting them throughout their migratory paths.

Copenhagen Protocol (2009): Addresses climate change by stressing the urgent need for emission-reducing technology. The protocol encourages countries to conduct research and development for new technologies while also preserving forests and evaluating sustainability. This is to serve as a follow-up to the Kyoto Protocol, which expires in 2012.

International Atomic Energy Agency Convention on Nuclear Safety (1994): Provides safety standards for land-based nuclear power plants in regard to the design, construction, and operation. It also makes financial and human resources available for assessment and verification of safety, quality assurance, and emergency preparedness.

International Convention on Oil Pollution Preparedness, Response, and Cooperation (1995): Requires participants to create procedures for handling oil pollution incidents. This includes reporting the incident, having equipment ready to handle a spill, running practice drills for handling an accident, and responding to help others in the event of a spill.

International Whaling Commission (IWC) (1946): Established by the International Convention for the Regulation of Whaling with the goal of setting annual quotas for whaling to prevent overharvesting. It did not work, so in 1970 the United States ceased all commercial whaling and banned all imports of whale products. In 1986, the IWC imposed a ban on all commercial whaling.

Kyoto Protocol (1997): A protocol to the United Nations Framework Convention on Climate Change, focusing on combating global warming through the stabilization of the concentrations of greenhouse gases in the atmosphere. Thirty-nine industrialized countries and the European Union are committed to the reduction of four greenhouse gases (carbon dioxide, methane, nitrous oxide, and sulfur hexafluoride) along with two groups of gases (hydrofluorocarbons and perfluorocarbons). They agreed to a reduction of their greenhouse gas emissions by 5.2 percent from 1990 levels. The United States has not signed the Kyoto Protocol.

Montreal Protocol (1987): A protocol detailing the Vienna Convention for the Protection of the Ozone Layer and aims at limiting the production of substances harmful to the stratospheric ozone layer by reducing and phasing out the production of ozone-destroying compounds. The treaty has been modified seven times and still highlights the importance of completely phasing out CFCs. Since the protocol came into effect, the atmospheric concentrations of CFCs and related hydrocarbons have either leveled off or decreased. The Montreal Protocol is one of the most successful international environmental agreements in history.

Northwest Atlantic Fisheries Treaty (1950): Aims to protect and conserve fisheries of the northwest Atlantic Ocean in order to maintain a maximum sustained catch from those fisheries.

Polar Bear Treaty (1973): An agreement between Canada, Denmark, Norway, Russia, and the United States to protect polar bears through conservation efforts, including limiting the hunting, killing, and capturing of bears. It also protects the ecosystems of polar bears.

Protection of the Arctic Marine Environment (PAME) (1991): Mandates sustainable use of both land and sea Arctic marine environments.

Ramsar Convention on Wetlands of International Importance (Ramsar) (1971): Works to preserve wetlands and use their resources sustainably. Under this convention, wetlands include swamps, marshes, lakes, rivers, wet grasslands, peatlands, oases, estuaries, deltas, tidal flats, near-shore marine areas, mangroves, coral reefs, and human-made sites such as fish ponds, rice paddies, reservoirs, and salt pans. This is the only international environmental treaty that addresses one type of ecosystem.

Rio Declaration on Environment and Development of the United Nations Conference on Environment and Development (UNCED) (1992): Reaffirms the Declaration of the United Nations Conference on the Human Environment (1972). It created 27 principles to guide sustainable development.

Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (PIC) (1998): Aims to protect human and ecosystem health through proper use of potentially harmful pesticides and industrial chemicals. It also promotes sharing of information and responsibility.

Stockholm Convention on Persistent Organic Pollutants (POPs) (2004): Established to ban or phase out 12 of the worst persistent organic pollutants (POPs), including DDT, eight other pesticides, PCBs, dioxins, and furans. These were called the "dirty dozen."

UN Convention to Combat Desertification (CCD) (1994): Hopes to reduce desertification and the effects of drought through international cooperation on issues of conservation, rehabilitation, and sustainable development. It focuses especially on areas with large drought issues, including Africa.

UN Convention on the Law of the Sea (UNCLOS) (1982): Establishes rules for the many uses of the ocean and its resources and addresses multiple issues in the world's oceans including piracy, navigational rights, economic rights, pollution, scientific research, and preserving marine organisms. It is one of the longest treaties in history.

UNECE Convention on Access to Information, Public Participation in Decision-Making, and Access to Justice in Environmental Matters (Aarhus Convention) (1998): Creates public access to environmental information, public involvement in environmental decision-making, and public access to impartial review processes.

UN Fish Stocks Agreement (UNFSA) (1995): Focuses on the long-term conservation and sustainable use of migratory ocean fisheries, aiming to improve the management of these fisheries. It stresses the precautionary principle and the interconnectedness of ecosystems as well as the obligation of nations to monitor fishing activities, pollution, and waste in international waters. This agreement addresses issues that were omitted or not sufficiently covered by the UN Convention on the Law of the Sea.

UN Framework Convention on Climate Change (UNFCCC) (1992): Established to address climate change and stresses international cooperation and collaboration to stabilize greenhouse gas concentrations in the atmosphere. The updated version of this convention is the Kyoto Protocol.