

# AMERICAN PLANNING ASSOCIATION

## First Coast Section, Florida Chapter



## Environmental Planning

### Regulation by 'Acronym'

Fall AICP Short Course

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**1.0 What is Environmental Planning?** Environmental planning is a relatively new field of study that aims to merge the practice of urban planning with the concerns of environmentalism. Essentially speaking, while urban planners have traditionally factored in economic development, transportation, sanitation, and other services into their decisions, environmental planners add sustainable (social, ecological & economic) outcomes as important factors in the decision-making process. What exactly constitutes the "Environment", however, is somewhat open to debate among these practitioners, as is the exact scope of the intended environmental benefits. Chief concerns among environmental planners include the encouragement of sustainable development, green building technologies, and the preservation of environmentally sensitive areas.

In the United States, for any project, environmental planners deal with a full range of environmental regulations from federal to state and city levels. A rigorous environmental process has to be undertaken to examine the impacts and possible mitigation of any construction project. The environmental assessments encompass areas such as land use, socioeconomics, transportation, economic and housing characteristics, air, noise, wetlands, endangered species, flood zones, coastal zones, visual studies among others. Depending on the scale and impact of the project, a full-blown environmental review is known as an Environmental Impact Statement (EIS), and the less extensive version is Environmental Assessment (EA). Procedures follow guidelines from National Environmental Policy Act (NEPA), State Environmental Quality Review Act (SEQRA) and/or City Environmental Quality Review (CEQR) and other related federal or state agencies published regulations.

**2.0 Introduction.** The primary objective of environmental planning is that the planner must be able to develop plans and land use regulations that will secure two broad goals: 1) To protect people and property from natural and man-made hazards; and, 2) to protect and maintain important natural and man-made resources. There are several areas of environmental planning: classic planning studies; NEPA studies and documentation; environmental studies; and, permitting.

**3.0 National Environmental Policy Act (1969).** The National Environmental Policy Act (NEPA) is a United States environmental law that was signed into law on January 1, 1970 by U.S. President Richard Nixon (Although enacted on January 1, 1970, its "short title" is "National Environmental Policy Act of 1969."). The preamble reads: "To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation..." The law applies only to federal agencies and the programs they fund. Essentially it requires that, prior to taking any "major" or "significant" action, the agency must consider the environmental impacts of that action. The National Environmental Policy Act of 1969 provided, for the first time, for a national environmental policy, created the Council on Environmental Quality (CEQ) to write regulations for Environmental Impact Statements (EISs), and advise the executive branch on environmental issues, and required Environmental Impact Statements (EISs), Environmental Assessments (EAs) or an appropriate level of documentation. These are required for all federal actions and must include the opportunity for public involvement. In 1976, the CEQ directed that the consideration of loss of prime farmlands be included as criteria of Environmental Impact Statements. The intent was to protect the environment from some of the major impacts which federal projects have had in the past and, as a result, a number of planning related programs have requirements to determine if a significant impact will occur as a result of projects with federal funding. The regulations binding on all agencies with regards to NEPA documentation and can be found at 40 Code of Federal Regulations (CFR).

**4.0 Environmental Impact Statements and Environmental Assessments.** Environmental Impact Statements (EISs) and Environmental Assessments (EAs) are documents written to aid in decision-making on significant impact to the environment. They explore feasible alternatives to a proposed action, and the likely environmental consequences of those actions. NEPA sought to put environmental concerns on par with economic motivations and technological feasibility when making a decision that could affect the environment. Hydrological/geological, biological/ecological, social and health are among the consequences considered. More recently, archeological, historical, and cultural impact analyses have been added to the EIS process. NEPA requires that an EIS must include: the environmental impacts of the proposed action; unavoidable adverse environmental impacts; alternatives including no action; the relationship between short term uses of the environment and maintenance of long-term ecological productivity; irreversible and irretrievable commitments of resources; and secondary/cumulative effects of implementing the proposed action.

An EA must generally include the same contents, but may be briefer. An EA is allowed only if the agency has issued a "Finding of No Significant Impact" (FONSI). The specific content of an EA is dictated by the specific section of the Code of Federal Regulations relating to the involved federal agency. If more than one federal agency is involved in a particular project, multiple EAs may be required. For example, a project involving both the Environmental Protection Agency and the United States Department of Agriculture will require an EA specific to each federal agency prior to the project's approval. The questions address in EISs and EAs are: what is the probable

impact of the proposed action? What are the adverse environmental effects that can be avoided? What are the available alternatives to the proposed action? What is the relationship between local short-term uses and the maintenance and enhancement of long term productivity? And what is the irreversible and irretrievable commitment of resources?

California Environmental Quality Act (CEQA), California being one of the first states to adopt a comprehensive law to govern the environmental review of public policy and project review.

**5.0 Clean Air Act (1970).** The United States Congress passed the Clean Air Act in 1963, the Air Quality Act in 1967, the Clean Air Act Extension of 1970, and Clean Air Act Amendments in 1977 and 1990. Numerous state and local governments have enacted similar legislation, either implementing federal programs or filling in locally important gaps in federal programs. The Clean Air Act regulates motor vehicle and other “non-stationary” pollution sources, established National Ambient Air Quality Standards (NAAQS), New Source Performance Standards (NSPS) and Prevention of Significant Deterioration (PSD) standards. It also established the areas of non-attainment of standards, Air Quality Control Regions (AQCR) and National Emission Standards for Hazardous Pollutants. The Clean Air Act also required State Implementation Plans (SIP) for these standards. The Clean Air Act (1990) proposed emissions trading, added provisions for addressing acid rain, ozone depletion and toxic air pollution, and established a national permits program.

In 2007, President Bush issued an executive order to cut greenhouse gas emissions from motor vehicles. It was spurred by a Supreme Court ruling that the EPA must take action under the Clean Air Act to regulate GHG emissions from motor vehicles. This case was *Massachusetts v. Environmental Protection Agency*, in which twelve states and several cities of the United States brought suit against the United States Environmental Protection Agency (EPA) to force that federal agency to regulate carbon dioxide and other greenhouse gases as pollutants. The U.S. Supreme Court decided 5-4 on April 2, 2007 that the EPA did have the authority under the Clean Air Act to regulate greenhouse gas emissions from motor vehicles. President Bush proposed the 20-in-10 Bill, a goal of reduce gasoline usage by 20 percent over the next ten years. He sent to Congress a proposal that would meet it in two steps: first, set a mandatory fuel standard that requires 35 billion gallons of renewable and other alternative fuels by 2017. That's nearly five times the 2012 current target. In 2017, this will displace 15 percent of projected annual gasoline use; and second, the proposal of continuing the efforts to increase fuel efficiency: reforming and modernizing Corporate Average Fuel Economy (CAFE) Standards for cars and extending the current Light Truck Rule. In 2017, this will reduce projected annual gasoline use by up to 8.5 billion gallons, a further 5 percent reduction that, in combination with increasing the supply of renewable and other alternative fuels, will bring the total reduction in projected annual gasoline use to 20 percent.

**6.0 Safe Drinking Water Act (1974) and Aquifers.** The Safe Drinking Water Act of 1974 has two main objectives: 1) protect the nation’s drinking water; and, 2) protect the public health. This act primarily deals with

underground water sources (aquifers) and sets water quality standards for drinking water. It also mandates a State Wellhead Protection Program, and most of you will be familiar with the implementation of this program through the Conservation Element of local municipality comprehensive plans that address wellhead protection. It also regulates underground injection wells; delineation of sole source aquifer; and well classification. An aquifer is an underground layer of water-bearing permeable rock or unconsolidated materials (gravel, sand, silt, or clay) from which groundwater can be usefully extracted using water wells. There are two types of aquifer: shallow and deep (similarly two types of wells). Shallow aquifers are basically composed of surface groundwater that has seeped into the soil.

**7.0 Clean Water Act (1977).** The Clean Water Act of 1977 is the law that controls all sources of water pollution in the United States including industrial waste, agricultural waste and municipal waste. Section 402 requires a permit for anyone seeking to discharge water pollutants into a body of water. The National Pollutant Discharge Elimination System (NPDES) is a permitting system for all point sources of water pollution and requires a Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP) and best Management Practices (BMPs). It is Section 404 of the Clean Water Act controls for the pollution of dredged or fill materials into navigable waters of the United States. Section 404 grants the US Army Corps of Engineers (USACOE) the jurisdiction and authority to implement permitting regulations. There are now four types of USACOE permit: Regional General, Individual, General and Nationwide permit. The primary regulatory basis for control of navigable waters of the United States lies in the River and Harbors Act of 1899. This act is the oldest federal environmental law in the history of the country. Both it and the Clean Water Act form the basis for the regulation of wetland impacts. Wetlands are areas supporting vegetation capable of withstanding wet conditions. Wetlands are delineated on the basis of topography, soils, biology and hydrology. A jurisdictional wetland is any water involved in “interstate commerce” and ACOE has jurisdiction (i.e. connected system) or any identified wetland that the State DEP has jurisdiction (i.e. isolated wetlands). Over 40% of the nation’s wetlands have been destroyed.

**8.0 National Flood Insurance Program.** The National Flood Insurance Program (NFIP) was created by Congress in 1968 through the National Flood Insurance Act of 1968. It enables property owners in participating communities to purchase insurance protection against losses from flooding. This insurance is designed to provide an insurance alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods. Participation in the NFIP is based on an agreement between local communities and the Federal Government that states if a community will adopt and enforce a floodplain management ordinance to reduce future flood risks to new construction in Special Flood Hazard Areas (SFHA), the Federal Government will make flood insurance available within the community as a financial protection against flood losses. The SFHAs and other risk premium zones applicable to each participating community are depicted on Flood Insurance Rate Maps. The Mitigation Division within the Federal Emergency Management Agency (FEMA) manages the NFIP, and oversees the floodplain management and mapping components of the Program.

The intent was to reduce future flood damage through community floodplain management ordinances, and provide protection for property owners against potential losses through an insurance mechanism that requires a premium to be paid for the protection. The program was first amended by the Flood Disaster Protection Act of 1973, which made the purchase of flood insurance mandatory for the protection of property within SFHAs. In 1982, the Act was amended by the Coastal Barrier Resources Act (CBRA) - Federal flood insurance is unavailable for new or significantly improved structures in specific areas. The program was further amended by the Flood Insurance Reform Act of 2004, with the goal of reducing "losses to properties for which repetitive flood insurance claim payments have been made." Key terms to understand are: 100-year flood plain (100% chance of flooding at least once in any 100 year period); Flood Zone 'X' (key flood zone area outside of the 100-year flood plain); Zone FW (Floodway); and Zones A, AE and AO (all within the 100-year flood plain). Key application terms include: Letter of Map Revision (LOMR) and Letter of Map Revision based on Fill (LOMR-F). Other applications include CLOMR (Conditional), CLOMR-F and LOMA (Letter of Map Amendment).

**9.0 Acronym Overload.** Another regulations to be familiar with include the Toxic Substance Control Act of 1976 that established the standards for acquisition of sufficient information to identify and evaluate potential hazards and regulations for the production, use, distribution and disposal of each substance. This law requires notification, record keeping and testing. Polychlorinated Biphenyls (PCBs) are the only substance banned by name in any environmental law. Most PCBs were manufactured as cooling and insulating fluids for industrial transformers and capacitors, and also as stabilizing additives in flexible PVC coatings of electrical wiring and electronic components. PCB production was banned in the 1970s due to the high toxicity of most PCB congeners and mixtures. PCBs are classified as persistent organic pollutants. They still allowed in "totally enclosed spaces" but have a tendency to explode under those conditions. The health effect, most persistently seen in children whose mothers were exposed during pregnancy, is liver damage.

The Comprehensive Environmental Response Compensation and Liability Act (CERCLA) of 1980 established the Superfund and provided the authority to EPA to respond to releases of hazardous wastes and material. The Act is designed to provide the public cradle-to-grave protection from hazardous waste and materials and also controls inactive hazardous waste site. CERCLA was passed primarily in response to the Love Canal Disaster in NY (1978, 1980), near Niagara Falls, and the partial meltdown of the reactor core at Three Mile Island, PA in 1979.

**10.0 Love Canal Disaster.** In 1920, land was sold in public auction to the City of Niagara Falls, who used the undeveloped area as a landfill for chemical waste disposal. At the time, the canal was an ideal site for this purpose; the ground was largely impermeable clay, and the surrounding area was sparsely populated. In 1942, Hooker Chemical and Plastics Corporation (which became a subsidiary of Occidental Petroleum in 1968) expanded use of the site, and, by 1947, acquired the land for private use. In the subsequent five-year period, the company buried about 22,000 tons of toxic waste in the area. Once the site had been filled to capacity in 1952, Hooker closed the site, back-filled the canal, and covered it with four feet of clay. At the time of the closure, Niagara Falls' population

had begun to expand. The local school board was desperate for land, and attempted to purchase an area of expensive property from Hooker Chemical that had not yet been used to bury toxic waste. The corporation refused to sell on the grounds of safety, and took members of the school board to the canal and drilled several boreholes through the clay, showing that there were toxic chemicals below the surface. However, the board refused to capitulate. Eventually, faced with the property being condemned and/or expropriated, Hooker Chemical agreed to sell on the condition that the board buy the entire property for one dollar. The Purchase and Sale Agreement included a provision that explained the dangers of building on the site. Shortly thereafter, the board began construction on the 99th Street School in its originally intended location. However, the building site was forced to relocate when contractors unearthed two pits filled with chemicals. The new location was directly on top of the former landfill, and during construction, contractors broke through the clay seal that Hooker had installed to contain the chemical waste. In 1957, the City of Niagara Falls constructed sewers for a mixture of low-income and single family residences to be built on lands adjacent to the landfill site. During construction of the gravel sewer beds, the clay seal was broken again, the walls of the canal were breached, and chemicals seeped from the canal. The construction of the LaSalle Expressway restricted groundwater from flowing to the Niagara River. Following the wet winter and spring of 1977, the elevated expressway turned the breached canal into an overflowing pool.

According to the United States Environmental Protection Agency (EPA) in 1979, residents exhibited a "disturbingly high rate of miscarriages...Love Canal can now be added to a growing list of environmental disasters involving toxics, ranging from industrial workers stricken by nervous disorders and cancers to the discovery of toxic materials in the milk of nursing mothers." In one case, two out of four children in a single Love Canal family had birth defects; one girl was born deaf with a cleft palate, an extra row of teeth, and slight retardation, and a boy was born with an eye defect. A survey conducted by the Love Canal Homeowners Association found that 56% of the children born from 1974-1978 had a birth defect. President Carter declared a state of emergency at Love Canal on May 21, 1980, and the EPA agreed to evacuate 700 families temporarily. Eventually, the government relocated more than 800 families and reimbursed them for their homes. Hooker Chemical/Occidental was later ruled negligent, but not reckless, in selling the site to the school board and paid \$129 million in damages.

**11.0 More Acronyms.** The Resource Conservation Recovery Act of 1976 (RCRA) classified hazardous waste into four classes: ignitability, reactivity, corrosivity and toxicity. The Act established standards for tracking hazardous waste: generation, transportation, disposal and treatment. It also provided for a permitting process for facilities that use hazardous materials and required hazardous waste management plans by state, including solid waste landfills. This act regulates active site, not historical sites (CERCLA). It also provided protection for whistleblowers. A 1984 Amendment extended this act to Underground Storage Tanks (UST) and Leaking Underground Storage Tanks (LUST). The Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) of 1972 provides for a risk evaluation of pesticides, classifies and certifies pesticides by specific use, restricts pesticides deemed harmful and enforcement provisions. The Aviation Safety and Noise Abatement Act of 1979 (ASNA)

established a system of measurement for airport-generated noise and determining the exposure of individuals. The Act also developed a standardized airport noise-compatibility planning program.

**12.0 Other Environmental Legislation and the Basis of Federal Power.** Other federal laws that are prevalent in environmental planning includes: the National Historic Preservation Act of 1966 dealing with cultural resources; the Department of Transportation Act of 1966, specifically Section 4(f) and Section 6(f); the National Coastal Zone Management Act of 1972 regarding estuarine wetlands and sand (sandbars and dunes); the Endangered Species Act of 1973 that established the US Fish and Wildlife Service; and the Tennessee Valley Authority (TVA) that established during the New Deal that created an extensive set of programs from flood protection and water management to recreational development and power generation for the Tennessee River Valley.

The basis for Federal Power can be found in Article 1, Section 8, Clause 3 of the United State Constitution, known as the Commerce Clause, and Article 1, Section 8, Clause 18 of the United States Constitution, known as the Necessary and Proper Clause. Two other key legal cases to be aware of are the *Calvert Cliffs Coordinating Committee v. Atomic Energy Commission* (AEC) of 1971, which required any and all types of environmental impacts covered by NEPA be considered in AEC nuclear construction program, and *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon* of 1995, which extended the endangered species protections of the Endangered Species Act to private property.

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