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The Influence of Environmental Law on Nebraska Land Use

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I. INTRODUCTION

Historically, governmental control and regulation of private lands has occurred mainly in urban areas and has been carried out primarily by local political subdivisions. The typical mechanisms for regulation have been zoning and building codes.

Of course local zoning and building codes remain prominent land use control devices, and in Nebraska their application has been expanding.[1] However, environmentally based laws and regulations are now also a major component of what is an increasingly pervasive governmental influence on the use of privately owned land.

Locally, notions of the appropriate scope of governmental regulations are changing. Significant segments of many

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1. States have traditionally chosen to delegate most land use control powers to local units of government (*i.e.*, counties and municipalities), and Nebraska is no exception. The emphasis placed on local control is illustrated by the following comment from a Nebraska legislative committee:

> The Committee reports that with few exceptions, the citizens of Nebraska feel that all application of land use control should lie at the local level. The Committee is of the opinion that the primary and first goal of local entities should be for formulation of land resource policies relating to the general use of land and the implementation of said policies, county by county, with existing laws providing for the development of zoning ordinances and resolutions. State coordination and the [preparation] of land development plans should be reflective of the policies established at the local level.

NEBRASKA LEG. COUNCIL COMM. REP. NO. 223, 83d Leg., 2d Sess. 5-6 (1975).

Nonetheless, at least in the area of mandatory planning, there has been some state pressure on and some state review of local land use control efforts. *See* NEB. REV. STAT. §§ 84-151 to 160 (Reissue 1976). *See generally* Coupland, *Rural Zoning in Nebraska*, 54 NEB. L. REV. 586 (1975).

communities now call for regulation of aesthetics and building design, limits on community growth, and mandatory landscaping.[2] At the state and national level, there is an increasing awareness of the relationship between land use and environmental degradation.[3] In addition, it is increasingly recognized that many land uses have impacts which extend far beyond the immediate political subdivision in which they occur.[4] Finally, the governmental sector itself has increased in size to such a point that many of its programs and decisions, though not directly related to private land use, have substantial indirect impact.[5] Thus today it is quite possible that considerations of environmental impact may influence or control decisions relating to the physical location, design standards, or operational procedures of a variety of land uses.

What follows is an examination of the land use implications of five areas of governmental regulation related to the environment: air pollution, water pollution, pesticide regulation, surface mining, and wildlife. As will be seen, laws and regulations in these areas are primarily state or federal in origin. Their impact, however, is felt by virtually every individual business, community, and landowner in the state.[6]

II. AIR POLLUTION

Federal and state laws combine to help protect air quality in Nebraska. Certain problems of national significance, such as

2. On aesthetics and architectural controls, see D. HAGMAN, URBAN PLANNING 93-96 (1975), and 3 N. WILLIAMS, AMERICAN LAND PLANNING LAW ch. 71 (1975). For an extensive treatment of the growth control issue, see 1 URBAN LAND INST., MANAGEMENT & CONTROL OF GROWTH (R. Scott ed. 1975).
3. *See, e.g.*, D. MANDELKER, ENVIRONMENTAL AND LAND CONTROLS LEGISLATION (1976); NAT'L SCI. FOUNDATION, ENVIRONMENT: A NEW FOCUS FOR LAND-USE PLANNING (1973).
4. For an example of consideration of one type of area-wide impact, see ABA SPECIAL COMM. ON ENVIR. LAW, DEVELOPMENT AND THE ENVIRONMENT: LEGAL REFORMS TO FACILITATE INDUSTRIAL SITE SELECTION (1974).

   The best-known discussion of the trend away from local land use controls is F. BOSSELMAN & D. CALLIES, THE QUIET REVOLUTION IN LAND USE CONTROL (1971). For a more recent consideration of what the "revolution" has wrought, see F. BOSSELMAN, D. FEURER & C. SIEMON, THE PERMIT EXPLOSION: COORDINATION OF THE PROLIFERATION (Urban Land Inst. 1976).
5. Examples would include agricultural price supports or set-aside programs, federal water projects, highway location and construction, or block grants and revenue sharing.
6. The applicable laws relating to the five areas to be discussed have broad impact statewide, but they are by no means the only environmental provisions having potential land use implications. Examples of other environmental areas in which existing or proposed laws could have land use ramifications include solid waste, drinking water, toxic substances, noise,

auto emission control, are dealt with on the federal level. Other problems of a more local nature are regulated by state standards or local ordinances; examples include regulation of stationary pollution sources such as alfalfa dehydration plants and open burning.

A. Federal Clean Air Act

The impetus for most current air pollution regulation is the federal Clean Air Act[7] which set up numerous criteria to help improve the nation's air quality. The Act was not the first federal air pollution law, but it did provide a more comprehensive framework than had prior legislation. The Act calls for most air quality planning to be done on the state level or, if certain problems are common to a particular geographic area, on a regional level.[8] Four general purposes are given for the Act:

> (1) to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population;
>
> (2) to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution;
>
> (3) to provide technical and financial assistance to state and local governments in connection with the development and execution of their air pollution prevention and control programs; and
>
> (4) to encourage and assist the development and operation of regional air pollution control programs.[9]

The purposes of the Act are to be achieved by a number of different plans and programs. These include establishment of national standards for major air pollutants,[10] establishment of a system of state plans to implement, maintain and enforce air

public lands practices, and a variety of issues associated with irrigation such as groundwater pollution and minimum stream flows.

7. 42 U.S.C. §§ 1857-1857l (1970 & Supps. I-IV 1971-1975). The Clean Air Act will be codified at 42 U.S.C. §§ 7401-7626. The Act has been amended at various times since its passage. Most recently, substantial amendments were adopted in August of 1977. *See* Clean Air Act Amendments of 1977, Pub. L. No. 95-95, 91 Stat. 685.

   Congressional Quarterly called the Act with its 1977 amendments "the nation's most complex and far-reaching environmental law. It affects virtually all industrial and transportation activity, the production and use of energy, and real estate development." 35 CONG. Q. 1629, 1629 (1977).

8. Clean Air Act, § 102 (codified at 42 U.S.C. § 1857a (1970)) (to be codified at 42 U.S.C. § 7402).

9. *Id.* § 101 (codified at 42 U.S.C. § 1857(b) (1970)) (to be codified at 42 U.S.C. § 7401).

10. *Id.* §§ 108-109 (codified at 42 U.S.C. § 1857c-3 to -4 (1970)) (to be codified at 42 U.S.C. §§ 7408-7409).

standards and goals for each state or region,[11] establishment of standards for motor vehicle emissions[12] and new stationary source emissions,[13] and Environmental Protection Agency (EPA) regulation of sales of fuel and fuel additives.[14]

Two sets of national standards for major air pollutants have been established.[15] One set (primary) is aimed at protecting the public health, and the other set (secondary) is more stringent and aimed at enhancing the general public welfare. Each carries a different timetable for compliance. These so called ambient air quality standards, both primary and secondary, establish the maximum permissible concentrations in the atmosphere of each pollutant. That is, an ambient air standard relates to how much of a particular pollutant is present in the atmosphere regardless of the source. "Primary" standards, aimed at protecting public health, were to be attained "as expeditiously as practicable" but in no case later than three years from approval of the state plans for achieving the primary standards.[16] Two year extensions were available if certain criteria were met and the governor of a state applied for the extension when the implementation plan was submitted.[17] "Secondary" standards, to protect the public welfare, were to be attained within "a reasonable time."[18]

Under the terms of the Clean Air Act, a plan providing for implementation, maintenance, and enforcement of the primary and secondary standards was to be submitted to the EPA for approval by each state. The EPA could approve or disapprove such a plan or, if the state's plan was not in accordance with the

11. *Id.* § 110 (codified at 42 U.S.C. § 1857c-5 (1970 & Supp. V. 1975)) (to be codified at 42 U.S.C. § 7410).
12. *Id.* § 202 (codified at 42 U.S.C. § 1857f-1 (1970 & Supp. V. 1975)) (to be codified at 42 U.S.C. § 7521).
13. *Id.* § 111 (codified at 42 U.S.C. § 1857c-6 (1970 & Supp. V. 1975)) (to be codified at 42 U.S.C. § 7411).
14. *Id.* § 210 (codified at 42 U.S.C. § 1857f-6c (1970 & Supp. V. 1975)) (to be codified at 42 U.S.C. § 7544).
15. *Id.* § 109 (codified at 42 U.S.C. § 1857c-4 (1970)) (to be codified at 42 U.S.C. § 7409).
16. *Id.* § 110(a)(2)(A)(i) (codified at 42 U.S.C. § 1857c-5(a)(2)(A)(i) (1970)) (to be codified at 42 U.S.C. § 7410).
17. *Id.* § 110(e) (codified at 42 U.S.C. § 1857c-5(e)(1970)) (to be codified at 42 U.S.C. § 7410).
18. *Id.* § 110(a)(2)(A)(ii) (codified at 42 U.S.C. § 1857c-5(a)(2)(A)(ii) (1970)) (to be codified at 42 U.S.C. § 7410).

    The 1977 amendments extended the deadline for attaining national primary ambient air standards from mid-1977 until December 1982 or, in some special cases, until December 1987. Clean Air Act Amendments of 1977, § 129(b), Pub. L. No. 95-95, 91 Stat. 685, 746-47.

Clean Air Act, the EPA could set forth an alternate plan. Judicial review was available.[19]

Another area that the EPA was to regulate was emission standards for all new "stationary sources."[20] The term "stationary source" refers to any building structure, facility or installation which emits or may emit any air pollutant—obviously a large category of sources.

B. The Nebraska Response

In Nebraska, primary and secondary standards implementation plans were prepared by the Nebraska Department of Environmental Control (DEC) and submitted to the EPA for review.[21] The DEC, along with the Nebraska Environmental Control Council, was established in 1971 with passage by the legislature of the Nebraska Environmental Protection Act.[22] The Environmental Control Council consists of sixteen members appointed by the governor with the advice and consent of the legislature. Each member represents a special interest group within the state.[23] The Environmental Control Council is to determine general policy under the State act. It has the power to classify air, water, and land contaminants according to levels and types of discharges or emissions.[24]

The Department of Environmental Control, as established in 1971, has the power and duty to supervise the enforcement and administration of the state Environmental Protection Act.[25] Statutorily enumerated powers and duties include developing plans for the prevention, control, and abatement of new or existing pollution; consulting and cooperating with other state, federal and interstate agencies to further purposes of the Act; accepting and administering loans and grants from the federal government and other sources; issuing permits; conducting inspections and hearings; and instituting legal proceedings.[26] The

19. Clean Air Act § 110(c), (f)(2) (codified at 42 U.S.C. § 1857c-5(c), (f)(2) (1970 Supp. V 1975)) (to be codified at 42 U.S.C. § 7410).
20. *Id.* § 111 (codified at 42 U.S.C. § 1857c-6 (1970 & Supp. V. 1975)) (to be codified at 42 U.S.C. § 7411).
21. *See* Neb. Dep't Envir. Control, Rules and Regulations for Air Pollution Control (effective June 17, 1975) (compiled in 27 NEB. ADM'N RULES & REGS. (1975)).
22. NEB. REV. STAT. §§ 81-1501 to 1533 (Reissue 1976). *See generally* Comment, *The Nebraska Environmental Protection Act: Effects and Implications for the Nebraska Community*, 7 CREIGHTON L. REV. 283 (1974).
23. NEB. REV. STAT. § 81-1503 (Reissue 1976).
24. *Id.* § 81-1505.
25. *Id.* § 81-1504.
26. *Id.*

DEC is also to conduct studies, investigations, research and demonstrations relating to pollution, to collect and disseminate information, and to conduct educational and training programs.[27]

The implementation plan Nebraska submitted to the EPA to comply with the Clean Air Act was published with the Nebraska Air Pollution Control Regulations.[28] National primary and secondary ambient air quality standards were adopted by Nebraska as were the national standards for new and complex sources and the national emission standards for hazardous air pollutants. Other areas coming under the rules were process operations and fuel burning equipment emissions. Additional DEC Rules cover emission standards for incinerators, sulfur compound emissions, and nitrogen oxides. Open burning is prohibited under most circumstances with exceptions such as recreational purposes, agricultural operations, and training of firefighting personnel. Visible emissions and dust are also regulated. Sources covered by the state plan in Douglas and Lancaster County were to be in compliance with air pollution standards by July 1975; outstate sources were to comply by July 1976.[29] There are procedures for obtaining extensions of these times, however, and a number of sources have been granted delays in their compliance deadlines.[30]

C. Significant Deterioration

Although the state plans are formed under the umbrella of federal rules and regulations and must meet federal criteria, the exact needs of different states or regions may vary. Nebraska's concerns with air pollution, for example, differ from the concerns of states which are more industrialized and heavily populated because the air in Nebraska is basically clean.[31] In Nebraska, the standards set by the EPA for minimum compliance would, in much of the state, allow a decrease in present air quality. It is for this reason that the so-called "nondegradation" or "significant deterioration" policy for air quality is of special interest to Nebraskans.[32]

27. *Id.*
28. Neb. Dep't Envir. Control, Rules and Regulations for Air Pollution Control (effective June 17, 1975) (compiled in 27 NEB. ADM'N RULES & REGS. (1975)).
29. *Id.*
30. *Id.* R. 16.
31. The DEC reports that only four of Nebraska's ninety-three counties have air quality below national ambient standards. The four counties are Douglas, Sarpy, Cass, and Lancaster. Lincoln J., Dec. 2, 1977, at 11, col. 1.
32. *See generally* Hamby, *The Clean Air Act and Significant Deterioration of Air Quality: The Continuing Controversy*, 5 ENVT'L AFF. 145 (1976);

Nondegradation as applied to air quality management is a policy providing that in the areas of the country in which the air is of higher quality than the federal secondary standards, the air quality should not be allowed to deteriorate significantly. Any policy of preventing deterioration, however defined and implemented, could have a substantial impact on land use development. Commercial, industrial, and residential patterns might be determined by the concern for maintaining present air quality, and a clash between air quality and certain types of economic growth would be possible in some areas.[33]

The policy of preventing deterioration has not been firmly established in air quality control. Under its original interpretation of the Clean Air Act, the EPA declined to require that state implementation plans provide against significant deterioration of existing clean air areas. The EPA believed it lacked power under the Act to require states to maintain levels of pollution lower than the secondary standards. In a lawsuit challenging the EPA's view, a federal district court examined the stated purpose of the Clean Air Act, its legislative history, and administrative interpretations. The court ruled that the Act was based on a policy of nondegradation of existing clean air, and permitting states to submit plans allowing pollution levels to rise to the secondary standard level was contrary to the legislative policy of the Act and, therefore, invalid.[34] The district court's view was upheld on appeal.[35] In response to that lawsuit, the EPA established regulations for the prevention of significant deterioration of air quality.[36]

The EPA's regulations for preventing significant deterioration call for establishment of "classes" of different allowable incremental changes in total suspended particulates and sulfur dioxide.[37] The regulations establish three "zones" into which all areas of the country are to be divided. Class I applies to areas in which practically any change in air quality is considered signifi-

Hines, *A Decade of Nondegradation Policy in Congress and the Courts: The Erratic Pursuit of Clear Air and Clean Water*, 62 IOWA L. REV. 643 (1977).

33. For a discussion of the types of clashes that can occur, see, *e.g.*, Schroeder, *The Impact of Current Air Pollution Legislation and Litigation on Energy Production*, 54 ORE. L. REV. 515 (1975), and *The Influence of Federal Air Pollution Control Law on Planning New Commercial and Industrial Development*, in 5 ALI-ABA, ENVIRONMENTAL LAW 9-32 (Jan. 1975).

34. Sierra Club v. Ruckelshaus, 344 F. Supp. 253 (D.D.C. 1972).

35. *Aff'd per curiam*, 4 E.R.C. 1815 (D.C. Cir. 1972) (unreported opinion), *aff'd by an equally divided Court sub nom.* Fri v. Sierra Club, 412 U.S. 541 (1973).

36. 40 C.F.R. § 52.21 (1977).

37. *Id.*

cant; Class II applies to areas in which deterioration normally accompanying "moderate well-controlled growth" is considered insignificant; and Class III applies to those areas in which deterioration up to the national secondary standards is considered insignificant.[38] The EPA's basic approach was adopted by Congress, with some modifications, in the 1977 Clean Air Act Amendments.[39]

D. Land Use Impacts

It is estimated that at least one thousand Nebraska business, industrial, agricultural, and other interests are covered by state air pollution laws[40] and, even without nondegradation regulations, present air quality rules and regulations have an effect on how Nebraska land is used. Power plants, for example, and other stationary sources, pollute primarily with sulfur oxides and smoke particles (particulates). It is possible, especially with Western coal so handy and Nebraska's fabled groundwater reserves for cooling, that more power plants could be constructed in Nebraska to serve urban needs outside the state. Though sophisticated air pollution control equipment is available, the cost is great and passed on to the consumers. Pressure by the industry often runs against maintaining clean air because of the cost.[41]

In May, 1976, the Nebraska Environmental Control Council eliminated a rule that automatically required expensive pollution control equipment on any large power plant built within twenty miles of another power plant. In its place, the Council adopted a rule providing that the effect on general air quality as measured at the site will determine whether the equipment must be installed.[42] This rule will affect the Nebraska Public

38. *Id.*
39. The 1977 amendments call for mandatory Class I status for all international parks, national memorial parks and wilderness areas exceeding 5,000 acres, and national parks exceeding 6,000 acres. Class II is to initially include all other clean-air areas. Redesignation to Class III can only occur after hearings and studies are conducted. State plans must require permits for pollution sources in all clean-air areas. *See generally* Clean Air Act Amendments of 1977, § 127, Pub. L. No. 95-95, 91 Stat. 685, 731-42.
40. *Summary of Activities—1976*, DEC NEWSLETTER, Jan.-Feb. 1977, at 2 (Neb. Dep't Envir. Control).
41. *See, e.g.*, Kramer, *Economics, Technology, and the Clean Air Amendments of 1970: The First Six Years*, 6 ECOL. L. Q. 161 (1976); *Coal Clean up: Smokestack Scrubbers, Still Opposed by Some, Are Proving Feasible*, Wall St. J., June 14, 1977, at 1, col. 6.
42. Neb. Dep't Envir. Control, Rules and Regulations for Air Pollution Control R. 17 (effective June 17, 1975) (compiled in 27 NEB. ADM'N RULES & REGS. (1975)).

Power District's plans to build a second power plant near the Sutherland Reservoir in central Nebraska. The scrubber which would have been required under the former rule would have added millions of dollars to the plant's construction costs.[43] Air quality should still be protected under the new rule however. Before a permit is issued to build the second plant without a scrubber it will have to be shown the plant can operate without violating air quality standards.[44]

Another example of the potential impact of air quality considerations can be seen with respect to the alfalfa dehydration industry in Nebraska. Dehydrated alfalfa is used primarily for livestock and poultry feed and Nebraska plants provide between forty and fifty percent of the nation's total production of dehydrated alfalfa.[45] The plants have certain standards to meet under the Nebraska Implementation Plan—especially in particulate and visible emissions—and some plants have had problems meeting these requirements. Necessary abatement equipment is hard to obtain and is costly. The cost per plant for abatement equipment was estimated by the DEC to average 30,000 dollars. A number of plants have sought extensions of their compliance deadlines to avoid having to shut down for failure to comply.[46]

In the Omaha metropolitan area, where particulates, including such things as dust, fly ash, smoke, and aerosal mist, still present an air pollution hazard, new industry may face location problems. The problems arise because the 1977 amendments to the Clean Air Act require that before a new source may locate, air pollution levels in such "nonattainment areas" must be re-

43. *Air Pollution Proposal Deferred*, Lincoln J., Dec. 15, 1975, at 7, col. 2.

44. The air pollution laws affect power plants in a large number of ways. For example, Don Schaufelberger, NPPD deputy general manager has indicated that the requirements contained in the 1977 amendments mean NPPD cannot possibly meet the new construction timetable it outlined in the power supply plan it adopted in May, 1977. Simmons, *Amendments Foil NPPD Timetable*, Lincoln J., January 20, 1978, at 13, col. 1. And, by beginning construction when they did, one day before new regulations were to take effect, Grand Island may have saved $12 million in added construction costs for its $80 million power plant. Lincoln J., Mar. 1, 1978, at 32, col. 1.

45. Interview with Howard Elm, Neb. Dehydrators' Ass'n, Lincoln, Neb. (Sept. 16, 1975), *reported in* Reisdorff, Air Pollution Control (Nov. 24, 1975) (unpublished paper on file with C. Williams).

46. As of November, 1976, only five of eighty-one plants were not in technical compliance. Letter from Richard H. Hanson, DEC Legal Counsel, to C. Williams (Nov. 17, 1976).

In 1977, the DEC found nine plants which were not in compliance. Interview with Judy Lange, Assistant DEC Legal Counsel (April 25, 1978).

duced by an amount at least equal to the pollution from the new source.[47]

Indirect sources of pollution are also governed by standards of performance set out under the Nebraska rules. For example, a construction permit must be obtained from the DEC when facilities requiring or providing for large increases in parking capacities are constructed, or when certain highways or roads are constructed, or when there is airport construction.[48] These and other large-impact projects are the types for which a number of states are considering state-level land use planning.[49]

The goal of both federal and state air pollution laws is to work in combination to improve and maintain air quality. By permitting a fairly large amount of planning on the state level, it is hoped each state can deal with certain local problems while at the same time meeting minimum federal requirements. For Nebraska, it is the significant deterioration and nonattainment laws and regulations which are most likely to affect future land use decisions as Congress, the EPA, and the DEC continue the attempt to balance the costs and benfits of clean air.

III. WATER POLLUTION

The Federal Water Pollution Control Act was passed in 1948,[50] but it has, since that time, undergone many changes. The most fundamental of those changes was in October 1972, when Congress overrode a Presidential veto and passed a far-reaching set of amendments to the Act.[51] The amendments were so extensive (almost one-hundred single spaced pages) as to constitute a completely new and, according to at least one writer, "intimidating" Act.[52] In addition to the complexity of the Act, Congress is continually considering a number of possible changes, and the courts continue to interpret the meaning of its various provisions.[53] The following is an attempt to explain in

47. Clean Air Act Amendments of 1977, § 129, Pub. L. No. 95-95, 91 Stat. 685, 745-51. See a brief explanation of the impact of the 1977 amendments in DEC NEWSLETTER, Jan. 1978, at 4 (Neb. Dep't Envir. Control).
48. Neb. Dep't Envir. Control, Regulations for Air Pollution Control R.4 (effective June 17, 1975) (compiled in 27 NEB. ADM'N RULES & REGS. (1975)).
49. *See, e.g.*, ABA SPECIAL COMM. ON ENVIRONMENTAL LAW, *supra* note 4; Commentary, *Industrial Site Selection: Existing Institutions and Proposals for Reform*, 55 NEB. L. REV. 440 (1976).
50. Pub. L. No. 80-845, § 5, 62 Stat. 1155, 1158 (1948).
51. Pub. L. No. 92-500, 86 Stat. 816 (1972) (codified at 33 U.S.C. §§ 1251 to 1376) (Supp. V 1975) [hereinafter cited as 1972 Amendments].
52. W. ROGERS, ENVIRONMENTAL LAW 354 (1977).
53. The most recent and far-reaching amendment was passed by Congress in December of 1977 after three years of debate. *See* Clean Water Act of 1977, Pub. L. No. 95-217, 91 Stat. 1566.

general terms some of the provisions of the Act, as amended, and the hundreds of pages of regulations promulgated pursuant to those amendments as they may affect land use decisions in Nebraska.

A. Water Pollution Control Act Amendments of 1972

The objective and two major goals of the 1972 Amendments to the Act are set out in the first section of Title I:

> (a) The objective of this Act is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. In order to achieve this objective it is hereby declared that, consistent with the provisions of this Act—
>
> (1) it is the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985;
>
> (2) it is the national goal that wherever attainable an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983;[54]

Thus, by 1983, it was hoped that except where natural conditions prevented it, all of the waters of the United States would be "swimmable and fishable"; and by 1985, it was hoped that all discharge of pollutants into waterways would be ended. The 1972 Amendments to the Act were drafted to achieve these goals. The land use implications of these goals are obvious—to achieve them, a tremendous change in the way agriculture, industry, and individuals dispose of wastes must be accomplished.

While the Act deals with a number of areas, including such things as oil spills, hazardous substances, and vessel sewage, only three of its major provisions will be examined—those with the most direct and immediate impact on Nebraskans. The provisions are those dealing with regulation of so-called "point source" pollutant discharges from, for example, industry, livestock feedlots or municipal waste treatment plants;[55] regulation of "nonpoint source" pollution such as that from farm field erosion, or construction site runoff; and regulation of dredge and fill activities by the Army Corps of Engineers.

B. Point Source Regulation

The primary thrust of the 1972 Amendments to the Act as they affect direct discharges of pollutants into the nation's wa-

54. 33 U.S.C. § 1251a(1)-(2) (Supp. V 1975).

55. In April, 1976, the DEC indicated the following breakdown of point sources in Nebraska: 233 industrial sources, 397 municipal, and 442 feedlots. *See* NEB. DEP'T ENVIR. CONTROL, NEBRASKA'S CLEAN WATER PROGRAM (April 1976).

ters by private individuals and companies is through the National Pollutant Discharge Elimination System (NPDES) and its permit requirements.[56] The Act provides that the discharge of any pollutant by any person into the navigable waters of the United States is illegal unless the discharge is done in conformity with an NPDES permit.[57]

In Nebraska, the State Department of Environmental Control (DEC) is the agency responsible for issuing permits under a program approved by the federal Environmental Protection Agency.[58] The permits indicate such things as the amount of pollutants which may be discharged into the particular waterway, steps the discharges must go through to comply with incrementally more restrictive limitations, and required self-monitoring and reporting procedures.[59]

Thus, the basic thrust of the Act is the setting of national standards regarding the amount of a particular kind of effluent which may be discharged into waterways, with the individual sources of the pollutant regulated by permit. A national standard for each type of effluent avoids the possibility of one state setting low standards in order to attract industry or give its current industries a competitive advantage.

The individual effluent limitations are established by the EPA according to the technology available to the discharger for abating the pollution it causes. There are two significant interim dates, that is dates prior to the 1985 "no discharge" goal date, by which different levels of effluent treatment are to be achieved. By July 1, 1977, existing dischargers were required to adopt the "best practicable control technology currently available";[60] and by July 1, 1984, dischargers must adopt the "best available technology economically achievable."[61] These terms and the resulting effluent guidelines are being defined for various industries by the EPA and, sometimes through litigation, by the courts. They often contain adjustments for factors such as age of equipment, process employed, engineering aspects of control techniques, etc.[62]

56. 33 U.S.C. § 1342 (Supp. V 1975).
57. *Id.* § 1311(a).
58. *See* Neb. Dep't Envir. Control, Rules and Regulations Pertaining to the Issuance of Permits under the National Pollutant Discharge Elimination System (1975) (compiled in 24 NEB. ADM'N RULES & REGS. (1975)).
59. *Id.*
60. 33 U.S.C. § 1311(b)(1) (Supp. V 1975). An estimated 80 to 90 percent of the nation's industries met the July 1, 1977, deadline. 33 CONG. Q. 2667 (1977).
61. 33 U.S.C. § 1311(b)(2) (Supp. V 1975).
62. The 1977 Clean Water Act extended the July 1, 1977, best practicable technology deadline until April 1, 1979. Clean Water Act of 1977, § 56, Pub. L. No. 95-217, 91 Stat. 1566, 1592.

While most of the emphasis of the 1972 Amendments to the Act as applied to private dischargers is on the NPDES permits and the technology-based effluent limits described above, the amendments also provide that under certain circumstances effluent limits may be "derived" from or "related" to the water quality of the particular waterway into which the discharge is made.[63] What this means in general terms is that if a particular body of water is extremely polluted, discharges into it may be limited to an extent greater than can be accomplished by applying technology-based limits. If such extreme pollution exists, one remedy under the act might be a complete ban on any new discharges of the offending pollutants—thus foreclosing the possibility of a new industry locating on that waterway or foreclosing existing industry from expanding. Other remedies might include requiring a reduction in capacity of existing dischargers or perhaps even the shutting down of one or more dischargers.

Not only must an NPDES permit be obtained for industrial discharges, one must also be obtained for many livestock feedlot discharges. For feedlots, the DEC conducts an inspection and determines whether a permit is required.[64] If one is required, DEC personnel will work with the feedlot operator and perhaps other agencies, such as the Extension Service, to see that the design and operation of the feedlot conform to permit standards.[65]

The 1977 Act, which changed the best available technology deadline from 1983 to 1984, also modified some of the compliance requirements. The Act established a third standard, "best conventional technology," in lieu of the best available technology standard, for some industry. Best conventional technology effluent limitations must be achieved by July 1, 1984. Guidelines are to be established by the EPA which must consider the costs of cleanup, including energy costs, compared with the benefits. Best available technology standards continue to apply to all toxics. Clean Water Act of 1977, §§ 42, 48, 53, Pub. L. No. 95-217, 91 Stat. 1566.

63. 33 U.S.C. § 1312 (Supp. V 1975). For an analysis of these derived standards, see Goldfarb, *Better Than Best: A Crosscurrent in the Federal Water Pollution Control Act Amendments of 1972*, 11 LAND & WATER L. REV. 1 (1976).

64. There is also a parallel state permit program and the DEC inspection will determine the applicability of that permit requirement as well. Neb. Dep't Envir. Control, Rules and Regulations Pertaining to Livestock Waste Control R.2 (effective June 13, 1975) (compiled in 27 NEB. ADM'N RULES & REGS. (1975)). *See generally* NEB. DEP'T ENVIR. CONTROL, GUIDELINES FOR LIVESTOCK WASTE MANAGEMENT IN NEBRASKA (July 1977).

65. For information on the Nebraska feedlot permit program, see NEB. DEP'T ENVIR. CONTROL, THE SCOOP ON LIVESTOCK WASTE CONTROL IN NEBRASKA (April 1975), and Neb. Dep't Envir. Control, Rules and Regulations Pertaining to Livestock Waste Control (effective June 13, 1975) (compiled in 27 NEB. ADM'N RULES & REGS. (1975)). *See generally* Recker, *Animal Feeding*

Municipalities which discharge waste water into waterways are also required to have an NPDES permit.[66] To alleviate some of the tax pressure locally, a large federal grant program was established to help states and municipalities construct modern waste treatment facilities that will meet permit standards. The grant funds, administered by EPA, run into the billions of dollars annually.[67] In Nebraska, priority for federal grant money is established by the State Environmental Control Council.[68] Almost 300 sewage treatment facilities projects are currently being evaluated by the Council. In fiscal 1976, there were approximately 38 million dollars of federal monies available for construction grants in Nebraska, and approximately 30 million dollars was available for 1977. The money is allocated on a federal cost share basis of seventy-five percent,with the state of Nebraska contributing an additional twelve and one-half percent.[69]

The land use implications for communities arising from discharge limitations on municipal treatment works are potentially quite far-reaching. If the local sewage system becomes overloaded so that the terms of the discharge permit are violated, additional hook-ups to the system may be halted. Thus land development, or perhaps industrial expansion where industry is making use of a municipal sewage treatment facility, could be delayed indefinitely pending increase in sewage capacity. In addition, long range plans required for facilities grants can have significant impact on the types and location of growth in a particular area.[70]

C. Erosion and Sedimentation

In addition to provisions dealing with easily identifiable discreet sources of pollution, the 1972 Amendments to the Federal Water Pollution Control Act also attempt to deal with more generalized sources of pollution such as those resulting from

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Factories and the Environment: A Summary of Feedlot Pollution, Federal Controls and Oklahoma Law, 30 SW. L.J. 556 (1976).

66. 33 U.S.C. § 1342 (Supp. V 1975).
67. The 1977 Clean Water Act authorized $4.5 billion for the fiscal year ending September 30, 1978, and $5 billion per year for 1979 through 1982. Clean Water Act of 1977, § 30, Pub. L. No. 95-217, 91 Stat. 1566, 1576.
68. NEB. DEP'T ENVIR. CONTROL, *supra* note 55.
69. *Id.* For the 1978 fiscal year, Nebraska will be eligible for approximately $25 million, and in fiscal years 1979-1982, for approximately $27.5 million. 35 CONG. Q. 2668 (1977).
70. *See* D. MANDELKER, *supra* note 3, at 215-16; Rivkin, *Sewer Moratoria as a Growth Control Technique*, in 2 URBAN LAND INST., MANAGEMENT & CONTROL OF GROWTH 473 (R. Scott ed. 1975).

soil erosion and other similar "nonpoint" sources. Erosion occurs with wind and water wearing away the land surface by detaching and moving soil and rock material. There is some erosion under natural environmental conditions but accelerated erosion usually results from various human activities. Factors which determine how rapidly erosion will occur include the quantity of rainfall, its intensity and seasonal distribution, the slope or topography of the land, soil composition, soil compaction and the presence or absence of vegetative cover. Erosion itself decreases the productivity of land. The end product of erosion, sediment, and the chemicals carried by sediment, adversely affect numerous resources. Efforts to control erosion have been fairly successful where applied, but increased efforts are being advocated in order to fully protect Nebraska's surface and groundwaters.[71] Some impacts of sedimentation runoff include degradation of water quality in streams, rivers, lakes, and ponds; reduction of storage capacity in lakes and ponds used for irrigation or flood control; restriction of stream flows; alteration of aquatic habitat and increased water treatment costs. Nationwide, the extent of pollution from so-called nonpoint sources, *i.e.*, agricultural, forestry, and urban runoff and sediment, and acid mine drainage, is estimated to at least equal the amount of pollution caused by point sources, *i.e.*, industrial effluent and municipal sewage.[72]

Until very recently, almost all efforts to control soil erosion and sedimentation have been voluntary. Those individual farmers and ranchers who were interested in controlling erosion could receive technical and sometimes financial assistance through the efforts of the United States Soil Conservation Service or the Agricultural Stabilization and Conservation Service.[73] Erosion control is still voluntary in Nebraska, but at least fifteen states (including neighboring Iowa and South Dakota) have, since 1970, enacted laws to control at least some forms of erosion and sedimentation.[74] Some of the state laws apply only to

71. *See, e.g.*, PUBLIC PARTICIPATION IN NON-POINT SOURCE PLANNING (SEDIMENT & EROSION/208), 1976 CONFERENCE (Neb. Nat. Resources Comm'n & Neb. Water Resources Center 1976).

72. Almost two billion tons of sediment enter the nation's waters annually, and every day millions of pounds of nitrogen, phosphorus and fecal matter are also added to waters from nonpoint sources. *See generally* SOIL CONSERVATION SERV. U.S. DEP'T AGRIC., AGRIC. INFO. BULL. NO. 325, SEDIMENT: IT'S FILLING HARBORS, LAKES AND ROADSIDE DITCHES (1973); Grant, *Erosion in 1973-74: The Record and the Challenge*, 30 J. SOIL & WATER CONSERVATION 29 (1975).

73. *See, e.g.*, 16 U.S.C. §§ 509a, 590p (1976).

74. For compilations and summaries, see EPA, COMPILATION OF FEDERAL, STATE AND LOCAL LAWS CONTROLLING NONPOINT POLLUTANTS (1975), NAT'L

urban construction site erosion and exempt agriculture,[75] but others, such as Iowa's soil loss limits law, apply equally to agriculture.[76]

At the federal level, there are currently no mandatory programs, but federal funds are being used to study the erosion problem and plan for solutions.[77] The federal planning money is provided to help states meet their obligation under section 208 of the Act as amended.[78] Section 208 requires states to develop a comprehensive waste treatment management plan, one portion of which is to deal with nonpoint source pollution. So far the EPA's emphasis has been on local planning and reliance on Soil Conservation Service expertise in developing the best management practices for individual tracts. The planning in Nebraska is being coordinated by the Nebraska Natural Resources commission. The Commission has set up a liaison and steering committee, seven task force groups, and thirteen public advisory groups representing the state's river basins. Altogether, more than four hundred persons are involved in the planning process.[79]

Like other regulations in the area of water pollution, if mandatory rules are devised for nonpoint pollution control, there could be significant land use implications. In urban areas, contractors could be required to rapidly re-seed or re-grade land broken for construction projects. In rural areas, farmers could be required to install impoundment structures or waterways, tillage and crop practices might have to be changed, or limits might be placed on the amounts and types of chemicals which could be used on the land.

ASS'N OF CONSERVATION DIST., EROSION AND SEDIMENT CONTROL PROGRAMS: SIX CASE STUDIES (1976), and NAT'L ASS'N OF CONSERVATION DIST., 208 WATER QUALITY PROJECT (Info. Letter No. 2, June 1, 1976).

75. *E.g.*, Maryland Sediment Control Act, MD. NAT. RES. CODE ANN. §§ 8-1101 to 1108 (1974).

76. IOWA CODE ANN. chs. 467A to 467D (West 1971 & Supp. 1977-1978).

77. The original appropriation provided $300 million for fiscal years 1974 through 1976. Agee, *EPA's Role in Non-Point Source Planning*, in PUBLIC PARTICIPATION IN NON-POINT SOURCE PLANNING (SEDIMENT & EROSION/208), 1976 CONFERENCE 11, 13 (Neb. Nat. Resources Comm'n & Neb. Water Resource Center 1976).

78. 33 U.S.C. § 1288 (Supp. V 1975). *See also* Montgomery, *Control of Agricultural Water Pollution: A Continuing Dilemma,* 1976 U. ILL. L.F. 533; Pisano, *Nonpoint Pollution: An EPA View of Areawide Water Quality Management*, 31 J. SOIL & WATER CONSERVATION 94 (1976).

79. For results to date, see NEB. NAT. RESOURCES COMM'N, WORK PLAN FOR STATEWIDE WATER QUALITY MANAGEMENT PLANNING (March 1977). The Commission is currently carrying out the items required in the Work Plan.

Many farmers are strongly opposed to mandatory conservation practices and so far neither federal nor Nebraska officials are proposing any mandatory requirements. However, it is not difficult to find farmers who have been damaged by a neighbor who is doing an inadequate job of land treatment. Blowing sand from a poorly managed center pivot system, mud from badly cared for up-hill ground filling holding ponds, or flooding and siltation of good crop production land are all possible effects felt by farmers. Farmers and ranchers have always been reluctant to force a neighbor to court over bad land use practices or to require mandatory conservation measures but, as land values and taxes go up and absentee ownership becomes more widespread, some people suggest this traditional view may change.[80]

D. Dredge and Fill Materials

In addition to provisions concerning point and nonpoint source pollution, the 1972 Amendments to the Federal Water Pollution Control Act contained at least one other provision which will have land use implications. This provision, contained in section 404, calls for United States Army Corps of Engineers' regulation of dredge and fill activities in the waters of the United States.[81]

The Corps of Engineers' regulatory authority dates all the way back to section 10 of the Rivers and Harbors Act of 1899.[82] That Act gave the Corps authority to regulate dredge and fill operations in "navigable waters." Navigable waters were originally defined as waters which were navigable-in-fact; that is, waters which were actually used or susceptible to use in their ordinary condition as highways for interstate or foreign commerce. Over the years the definition of what was navigable was expanded. By 1972, Corps authority to regulate, under the 1899 and other Acts, covered any waters which had in the past, or which were in the present or which might be in the future, if reasonable improvements were made, susceptible to interstate or foreign commerce.[83] It was this expanded notion of navigabil-

80. For additional discussion, see Howe, *Should Nebraska Have Conservation by Decree?*, NEB. FARMER, June 19, 1976, at 11; Nicol, Madsen & Heady, *The Impact of a National Soil Conservancy Law*, 29 J. SOIL & WATER CONSERVATION 204 (1974).
81. 33 U.S.C. § 1344 (Supp. V 1975).
82. 33 U.S.C. § 409 (1970).
83. For a discussion of the navigability concept and its history, see Harnsberger, *Eminent Domain and Water Law*, 48 NEB. L. REV. 325, 378-81 (1969), and MacGrady, *The Navigability Concept in the Civil and Common Law: Historical Development, Current Importance, and Some Doctrines That Don't Hold Water*, 3 FLA. ST. U.L. REV. 513 (1975).

ity which the Corps initially applied in spelling out the scope of its authority under section 404. In 1975 however, a federal district court held that the Corps was applying too narrow a scope to its regulatory authority under the 1972 Amendments to the Act.[84] The court found that the 1972 Amendments, which in section 502(7)[85] defined "navigable waters" as "waters of the United States," were intended to significantly broaden Corps authority to regulate dredge and fill activities. The court, therefore, ordered the Corps to promulgate regulations evincing that broadened authority.[86]

Reacting to the court's directive, the Corps developed a three-phase implementation plan for its dredge and fill permit authority.[87] Phase I, in effect since 1975, requires a permit to discharge dredge or fill material in currently navigable waters, tidal waters and nearby wetlands. In Nebraska, Phase I covered the Platte and Missouri Rivers. Phase II became effective in September 1976. It expanded Corps jurisdiction to natural lakes, primary tributaries and adjacent wetlands of Phase I waters. In Nebraska, Phase II waters include the Republican, Big Blue, Little Blue and Nemaha Rivers as well as natural lakes of more than five acres.[88] Phase III, implemented in July 1977, encompasses all remaining streams and bodies of water.[89]

The major justification for the expansion of Corps authority under section 404 has been the protection of national wetland resources. The primary emphasis of the 1899 Rivers and Harbors Act was to prevent obstructions to navigation and enhance the flow of interstate commerce. Environmental impact assessment was allowed under the 1899 Act but it was not a major consideration. The 1972 Amendments to the Federal Water Pollution Control Act on the other hand are first and foremost

84. Natural Resources Defense Council v. Callaway, 392 F. Supp. 685 (D.D.C. 1975).

85. 33 U.S.C. § 1362(7) (Supp. V 1975).

86. 392 F. Supp. at 686. For a discussion of the expanding Corps role, see Boxer, *Every Pond and Puddle—or, How Far Can the Army Corps Stretch the Intent of Congress*, 9 NAT. RESOURCES LAW. 467 (1976); Haines, *Wetland's Reluctant Champion: The Corps Takes a Fresh Look at "Navigable Waters,"* 6 ENVIR. 217 (1975); Comment, *Federal Control Over Wetland Areas—The Corps Expands Its Jurisdiction,* 28 U. FLA. L. REV. 723 (1976).

87. 33 C.F.R. § 209.120 (1976).

88. Interview with Robert Wall, Chief of Water Pollution Control Div'n, Neb. Dep't Envir. Control (April 24, 1978).

89. In 1977, Congress allowed for states with programs approved by the EPA to administer the permit program on all but traditionally navigable waters, and it seems likely Nebraska will attempt to qualify for this permit administration authority. Clean Water Act of 1977, § 67, Pub. L. No. 95-217, 91 Stat. 1566, 1601.

environmental in character, and they require the Corps to consider the environmental impact of proposed dredge and fill activities before issuing a permit.[90]

Proponents of expanded Corps authority cite the continued loss of the nation's marshes and wetlands—over forty percent or forty-five plus million acres have been lost since the country's founding.[91] This loss can have effects on a wide variety of fronts. For example, over ninety percent of the nation's seafood depends on the estuarine environment; migratory waterfowl habitat may be destroyed and recreation and commercial values lost; marshes and wetlands often act as natural flood storage areas; wetlands help filter out water pollution and sediment; and, in addition to losing those benefits, filling in wetlands often increases soil erosion problems. In Nebraska, the Game and Parks Commission reports a continuing decline in wetlands, especially in the Sandhills and south-central parts of the state.[92] In recognition of this problem and in order to reduce the loss of this type of land, approximately one-fourth of the states have enacted statewide wetlands protection measures and a number of other states have more limited regulations, usually covering only their coastal areas.[93]

The primary opposition to expanded Corps jurisdiction comes from agricultural interests. Specifically, there is a fear that many traditional farming and ranching activities, such as deepening irrigation ditches, enlarging ponds, or even plowing, may come under Corps permit authority. If they do, farmers anticipate increased costs, delays, and general red-tape as well as possible denials of permits.

As the three-phase regulations of the Corps now stand, materials resulting from normal farming and ranching activities are specifically excluded from the definition of dredge and fill materials which require permits.[94] The regulations list specific examples of the types of activities which are excluded from permit requirements. These include: plowing, cultivating, seeding, and

90. 33 U.S.C. § 1344 (Supp. V 1975).

91. NEBRASKA AFIELD & AFLOAT, May 1976, at 6 (Neb. Game & Parks Comm'n). For a general consideration of wetlands impact, see EPA, NATIONAL TECHNICAL INFORMATION SERVICE, IMPACTS OF CONSTRUCTION ACTIVITIES IN WETLANDS OF THE UNITED STATES (1977).

92. *Wildlife Week 76*, NEBRASKA AFIELD & AFLOAT, Mar. 1976, at 6 (Neb. Game & Parks Comm'n).

93. Roe, Jr., *Wetlands: Where Developers and Regulatory Programs Meet*, 11 REAL PROP., PROB. & TR. J. 701, 708 (1976).

94. 33 C.F.R. § 209.120(d)(4) (1977).

The 1977 Clean Water Act also specifically excludes "normal farming, silviculture, and ranching activities." 1977 Clean Water Act, § 67, Pub. L. No. 95-217, 91 Stat. 1566, 1600.

harvesting.[95] Stock watering pools and basins are also excluded by the terms of the regulations. Whether a particular activity which is not specifically excluded is nonetheless excluded because it is a "normal" farming or ranching activity is a matter of interpretation. Examples of activities open to interpretation—that is, where there is a chance the Corps will require a permit—include dredging for irrigation supply, draining wetlands for land reclamation, filling in farm roads, fords or bridges, and filling techniques for preventing soil erosion.

IV. PESTICIDES

Although environmentalists and government agencies promote the use of less pesticides (to reduce runoff of chemicals into streams and the build up of residues in foodstuffs, and also to save farmers unneeded expenditures), the figures for 1976 show that farmers are using more pesticides than ever. It is estimated that in 1976, pesticides (including insecticides, herbicides and fungicides) were used on seventy percent of the record 333 million planted acres in the United States. United States production and use of pesticides now exceeds three quarters of a billion pounds annually[96] and the total number of separate pesticides available exceeds 30,000.[97] In addition, a number of analysts feel that pesticides are about to open a new market, that of pasture and rangeland (approximately 940 million acres), of which less than one percent is currently treated.[98] Few people question that pesticides help crop yields (estimates suggest by an average of ten percent to fifteen percent). Yet, it is also true that recent discoveries and testing by both private and government scientists have revealed that pesticides once thought safe are, in fact, potentially harmful to man and the environment.[99]

95. 33 C.F.R. § 209.120(d)(4)(1977).
96. COUNCIL ON ENVIRONMENTAL QUALITY, ENVIRONMENTAL QUALITY 318 (5th Rep. 1974).
97. COUNCIL ON ENVIRONMENTAL QUALITY, ENVIRONMENTAL QUALITY 183 (4th Rep. 1973).
98. *Double Protection: Farmers Using More & More Pesticides to Safeguard Investment as Well as Crops*, Wall St. J., June 14, 1976, at 20, col. 1.
99. The substances which have caused the most concern about long-term environmental damage are the organochlorines (also called chlorinated hydrocarbons) and mercury based pesticides. Organochlorine pesticides include DDT, TDE, endrin, heptachlor, aldrin, dieldrin, chlordane, toxaphene, strobane and lindane. Nicholson, *The Pesticide Burden in Water and its Significance*, in AGRICULTURAL PRACTICES AND WATER QUALITY 184 (T. Willrich & G. Smith eds. 1970); COUNCIL ON ENVIRONMENTAL QUALITY, ENVIRONMENTAL QUALITY 225 (2d Rep. 1971).

In late 1970, primary authority over pesticides was transferred from the United States Department of Agriculture (USDA) to the newly created Environmental Protection Agency (EPA), where it was hoped that increased attention would be given to the long-term risks associated with pesticide use.[100] In 1972, the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) of 1947 was completely rewritten by Congress. Prior to 1972, FIFRA had focused principally on product labeling requirements which were designed to ensure that a pesticide user would receive an effective product which contained on its label minimum safety instructions for proper application.[101] FIFRA, therefore, regulated primarily the production and marketing of pesticides. The new law, called the Federal Environmental Pesticide Control Act of 1972 (FEPCA), retained the controls on labeling, and introduced new regulations and controls on the use of pesticides.[102] FEPCA also created a new standard for the EPA Administrator to use in determining whether a pesticide should be permitted to be sold on the market. The standard, an admittedly vague one, is whether the product causes "unreasonable adverse effects on the environment."[103] Section 2 of the Act defines this standard to mean "any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide."[104]

The balancing of risks and benefits envisioned in this definition is of particular importance with regard to four major pes-

The long-term environmental damage is due primarily to the impact of the chemicals on non-target aquatic organisms which, when exposed to pesticide residues, may be killed or experience a variety of sublethal effects. In addition they may pass increasingly higher concentrations of harmful residues up to higher levels in the food chain through the phenomenon known as biological magnification. S. BLOOM & S. DEGLAR, PESTICIDES AND POLLUTION 5 (1969). *See generally* THE BIOLOGICAL IMPACT OF PESTICIDES IN THE ENVIRONMENT (J. Gillett ed. 1970).

Additionally, some pesticides have been linked to increased cancer risk or other adverse impacts directly harming humans. For example, use and production of Aldrin and Dieldrin were suspended in 1974 by the EPA which cited an eminent cancer hazard. *In re* Shell Chemical Co. [1974] ENVIR. REP. (BNA) 30, 107 (F.I.F.R.A. No. 145). And the use of kepone has been suspended based in large part on its carcinogenic and nervous system effects. 41 Fed. Reg. 12333 (1976).

100. Spector, *Regulation of Pesticides by the Environmental Protection Agency*, 5 ECOL. L.Q. 233, 233-34 (1976). *See also* Bosch, *Insecticides and the Law*, 22 HASTINGS L.J. 615 (1971); Comment, *Farmworkers in Jeopardy: OSHA, EPA, and the Pesticide Hazard*, 5 ECOL. L.Q. 69 (1975).

101. 7 U.S.C. § 135b (1970).

102. 7 U.S.C. §§ 136 to 136y (1976).

103. *Id.* § 136a(c)(5).

104. *Id.* § 136(bb).

ticide decisions which the Administrator of the EPA must make. The decisions cover registration, classification, cancellation, and suspension.

The regulation of pesticide use begins with the registration of the pesticide with the Administrator.[105] No pesticide can be sold in the United States unless it is registered with the EPA. That applies not only to new pesticides, but also to all products previously registered under FIFRA. Such products were to be reregistered and classified under the FEPCA standards by October 1976.[106] After the applicant for registration has filed all the information requested by the EPA, the Administrator is then authorized to register the pesticide if he determines that it meets the statutory labeling requirements and will not cause "unreasonable adverse effects on the environment."[107]

If it is determined that registration is permissible, the Act requires the Administrator to classify the pesticide for either general or restricted use.[108] A general use classification will result if the pesticide, when used according to label instructions, "will not generally cause unreasonable adverse effects on the environment."[109] A classification for restricted use will result if the pesticide, when applied according to label instructions, "may generally cause, without additional regulatory restrictions, unreasonable adverse effects on the environment, including injury to the applicator."[110] The restricted use classification allows the Administrator to impose the requirement that the product be applied only by a certified applicator.

In order to make use of new information and accommodate reevaluation of particular products, FEPCA gives the Administrator authority to "cancel" a registration if he finds "unreasonable adverse effects on the environment."[111] Furthermore, every registered pesticide is automatically cancelled after five years unless the manufacturer requests continuation of the registration.[112] This provision allows for a periodic review of the risk-benefit balance for every registered pesticide. If the Administrator finds that a product "generally causes unreasonable ad-

105. *Id.* § 136a.
106. The EPA has currently fallen substantially behind in its registration efforts. One estimate suggested it would be 1986 before registrations are completed under the present system. 35 CONG. Q. 1718 (1977).
107. 7 U.S.C. § 136a(c)(5) (1976).
108. *Id.* § 136a(d)(1)(A).
109. *Id.* § 136a(d)(1)(B).
110. *Id.* § 136a(d)(1)(C).
111. *Id.* § 136d.
112. *Id.* § 136d(a).

verse effects on the environment," he can issue a notice to cancel or change classification (general to restricted use).[113] After receiving notice of the Administrator's intention to cancel, the registrant may request a public hearing. The questioned product may be kept on the market during the hearings. Any action taken by the Administrator after such a hearing is final and is reviewable in the court of appeals. If the manufacturer requests no hearing, the cancellation notice becomes final and effective after thirty days. An amendment to FIFRA in 1975[114] added a provision requiring the EPA Administrator to consult with the Secretary of Agriculture before issuing a cancellation notice except when an "imminent hazard" exists. In addition, the amendment requires the Administrator to specifically consider the effects any proposed cancellation will have on the agricultural economy.[115]

Since the pre-cancellation hearings can last several months, FEPCA also provides for a procedure for the immediate removal of a pesticide from the market. After the notice to cancel a classification has been given, the Administrator may "suspend" the registration of a product if necessary to avoid an "imminent hazard," which means a situation exists in which the continued use of a pesticide would be likely to result in unreasonable adverse effects on the environment.[116] A decision to suspend, however, whether with or without a prior hearing, does not affect the cancellation proceedings. Suspension is only a temporary measure, reserved for those situations in which immediate removal of the product seems required to avoid harm.

FEPCA has left the responsibility of implementing several aspects of the Act to state governments. Section 136, for example, states: "If any state, at any time, desires to certify applicators of pesticides, the Governor of such state shall submit a State plan for such purpose."[117]

Although the literal words of this section concerning certification of applicators appear to give the states the option of certification, the EPA has taken the position that state certification is required, and recent legislation gave the states until March 31, 1977, to submit an acceptable certification plan to the EPA for approval.[118]

113. *Id.* § 136d(b).
114. Pub. L. No. 94-140, 89 Stat. 751 (1975) (codified at 7 U.S.C. § 136d(b) (1976)).
115. *Id.*
116. *Id.* § 136(c)(1).
117. *Id.* § 136b(a)(2).
118. 40 C.F.R. § 171.7 (1977) (procedures for submission and approval of state plans).

In response to this demand on state governments, the Nebraska Legislative Council Committee on Agriculture and Environment, early in 1973, introduced Legislative Resolution No. 47[119] which authorized the appointment of a special legislative study committee to report on "the problems posed by use of modern pesticides, the impact on Nebraska by the passage of HR 10729 (The Federal Environmental Pesticide Control Act), and recommend what legislation, if any, shall be proposed to serve the best interest of the State of Nebraska."[120] Public hearings were held and a committee report was issued in January 1974.[121] Testimony before the committee given by representatives of the Nebraska Department of Agriculture indicated that existing Nebraska pesticide legislation, under the Economic Poisons and Devices Act,[122] applied only to registration and labeling. The committee stated:

> Since federal legislation now provides that the states adopt a program equal to federal requirements and encompassing applicator control measures, new legislation has been prepared for introduction by the Committee in the next session.
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> . . .
>
> The new bill provides for minimum regulation in this field since testimony reflected a total absence of pesticide accidents in Nebraska to the present time, and the Committee is of the opinion and finds that there is no present need for a complicated and total administrative control over the use of pesticides at this time.[123]

In 1975 the Nebraska Pesticides and Devices Act[124] was submitted for first reading. The bill provided for the repeal of the Economic Poisons and Devices Act, for authority to control pesticide applicators operating in Nebraska, and for certain other minimum regulations. The legislature did not act on the bill and it was reintroduced in 1976,[125] but the legislature again took no affirmative action.

Two related pieces of legislation did pass the second session however and were enacted into law in 1976. One of those adopted provides for the training and certification of certain pesticide applicators through county extension agents and specialists of the Cooperative Extension Service of the University of Nebraska.[126] The training programs are designed to prepare private

119. NEB. LEG. COUNCIL COMM. REP. No. 208, 83d Leg., 2d Sess. (1974).
120. *Id.* at 20-21.
121. *Id.* at 7.
122. NEB. REV. STAT. §§ 2-2601 to 2619 (Reissue 1977).
123. NEB. LEG. COUNCIL COMM. REP. No. 208, *supra* note 119, at 7-8.
124. L.B. 332, 84th Leg., 1st Sess. (1975).
125. L.B. 843, 84th Leg., 2d Sess. (1976).
126. NEB. REV. STAT. §§ 2-2613 to 2618 (Supp. 1977).

and commercial applicators for certification for the use of restricted use pesticides.[127] The Cooperative Extension Service is to issue recommendations of satisfactory training for each private and commercial applicator satisfactorily completing the training. The Director of Agriculture is then authorized to issue a certificate acknowledging the completion of training. Commercial applicators must also pass a written examination as a prerequisite to certification. Each certificate expires four years after the date of issuance. The other related bill appropriated funds for the University of Nebraska Cooperative Extension Service to aid in carrying out the training program.[128]

Currently, the EPA has not accepted Nebraska's applicator certification law. Although raising some twenty-five specific objections, the key issue is one of enforcement, with the EPA taking the position that the Nebraska law does not provide adequate state enforcement procedures nor sufficiently severe sanctions for violations.[129] As of the first of the year, the EPA took over enforcement of the federal pesticide law in Nebraska and began its own applicator certification program.[130]

The land use implications of pesticide regulations are indirect, but nonetheless substantial. For example, farmers using aldrin or dieldrin have had to change their farming methods since those products have been cancelled, and the more recent cancellation of chlordane and heptachlor may further change farm practices.[131] New chemicals replacing those cancelled may

127. To date, a total of twenty-two pesticides have been put on the "restricted" list by the EPA. Lincoln J., Feb. 27, 1978, at 6, col. 6.

128. The duties of the Cooperative Extension Service are set out in NEB. REV. STAT. § 2-2614 (Supp. 1977).

129. Costello, *EPA Still Hopeful Pesticide Solution Near*, Lincoln, J., Sept. 27, 1977, at 18, col. 5.

130. *Pesticide Law to be Enforced by Feds*, Lincoln J., Jan. 4, 1978, at 20, col. 4. EPA authorities have reportedly told Nebraska pesticide applicators that only the agency's regulations need be taken seriously, and that the state certification law can be ignored. Piersol, *EPA's Pesticide Laws Paramount*, Lincoln Sun. J. & Star, Jan. 22, 1978, at 1E, Col. 1.

Congress is currently considering some major changes in federal pesticide legislation. Both the House (H.R. 8681) and the Senate (S. 1678) in 1977 passed measures substantially amending the present law. The provisions of the two measures differ significantly, however, and 1978 will likely see lengthy conference committee proceedings before a compromise measure is adopted. The changes adopted may help resolve the EPA-state of Nebraska enforcement controversy. *See generally* 35 CONG. Q. 1718, 2289-90 (1977).

131. Nebraska Agriculture Director Roger Sandman has recently asked the EPA to let farmers resume the use of heptachlor to control cutworms in corn. Sandman reports that last year, the first year heptachlor could not be purchased, Nebraska farmers experienced the worst cutworm outbreak in twenty years. Lincoln J., March 10, 1978, at 21.

not be as effective, thus reducing yields. They may cost more to buy or apply. In some cases cancellation of a pesticide may mean a change in tillage practices or even crops grown. Regulation of applicators could result in some farmers being unable to apply restricted chemicals to their fields. Yet, some control over the millions of pounds of chemicals manufactured and applied to the land seems essential. Drawing the line is the tough part.

V. SURFACE MINING

In 1973, 670 mining operations took place in Nebraska, directly affecting 1,300 acres. Included in the mining activity were 40 limestone quarries, 607 sand, gravel and silt pits, 7 clay or shale pits, 15 sandstone pits, and 1 peat pit.[132] In 1973 the value of mineral production in Nebraska, including petroleum, was 80.8 million dollars.[133]

The majority of mining operations in Nebraska are unregulated by statute. Gas and oil operations are an exception and are regulated by the Nebraska Oil and Gas Conservation Commission.[134] There are also statutory provisions outlining the procedures to be followed in the development of minerals located on state land or land under state control. In addition, some aspects of surface mining fall within statutory provisions dealing with water or air pollution.

There has been some concern over the lack of regulation of mining operations in Nebraska. While the major concern has been the need for reclamation of mined land, the possible adverse effects of mining on plants and wildlife has also been an issue. Since mining began in Nebraska in the early 1900's, some 28,000 acres have been directly affected by mining operations. Of those acres, an estimated 7,000 or twenty-five percent, have been reclaimed. In 1974, 1,253 acres were affected by mining in Nebraska and 433 acres were restored. In addition, 911 acres from inactive and abandoned operations were also reclaimed for a total of 1,344 reclaimed acres for the year.[135]

One attempt to provide for reclamation of mined land was contained in a comprehensive mining bill introduced in the legislature in 1975.[136] Provisions for protection of the environment and for reclamation of lands affected by mining were

132. R. BURCHETT & D. EVERSOLL, INVENTORY OF MINING OPERATIONS IN NEBRASKA 3-4 (Resource Rep. No. 7, 1974).
133. Keyes & Burchett, *The Mineral Industry of Nebraska*, in 2 BUREAU OF MINES, U.S. DEP'T INTERIOR, MINERALS YEARBOOK 433, 433 (1973).
134. *See generally* NEB. REV. STAT. §§ 57-901 to 922. (Reissue 1974).
135. R. BURCHETT & D. EVERSOLL, *supra* note 132.
136. L.B. 523, 84th Leg., 1st Sess. (1975).

included. The stated objective of the reclamation was to re-establish on a continuing basis the vegetative cover, soil stability, water conditions and safety conditions appropriate to the area. Under the proposed bill, an operating permit was required from the Department of Environmental Control before mining operations could be engaged in. A permit would not be issued until a reclamation plan was submitted by the applicant and approved by the Department. Reclamation activities were to be completed within two years after completion or termination of mining on each segment of the area for which the permit was requested.[137]

A major impetus for state regulation had come in 1973 when federal strip-mining legislation was proposed. The federal legislation was later amended to cover only the surface mining of coal, which would not affect Nebraska.[138] The concern for state regulation was, therefore, decreased. The comprehensive mining bill was indefinitely postponed in February 1975.[139]

VI. WILDLIFE AND HABITAT

The growth of industrial, commercial, and agricultural endeavors often has resulted in displacement or extinction of many plants and animals. Industrial sites and parking lots replace grass and trees; pesticides are ingested by wildlife; and fence row to fence row planting destroys habitat and the animals dependent on it. The Nebraska Game and Parks Commission speaks of "alarming" losses of habitat in Nebraska resulting in substantial declines in upland game bird populations and reduced nesting sites in wetlands for waterfowl.[140] Substantial activity at both the state and federal level is now taking place in an effort to help wildlife and reverse current trends.

A. Federal Programs

Federal efforts to protect wildlife through legislation go back as far as the Lacey Act, passed in 1900, which was aimed at protecting song and game birds and game animals.[141] Im-

137. *Id.* § 29.

138. S. 425, as reported by a House-Senate Conference committee, H.R. REP. No. 93-1522, 93d Cong., 2d Sess. (1974), was passed by both Houses in December, 1974, and was pocket-vetoed.

139. For additional discussion of surface mining, see Mintz, *Strip Mining: A Policy Evaluation*, 5 ECOL. L.Q. 461 (1976), and Rowe, *Conservation Viewpoint: Surface-mine Reclamation: The Back to Contour Constraint*, 32 J. SOIL & WATER CONSERVATION 74 (1977).

140. NEBRASKA AFIELD & AFLOAT, July 1976, at 1, col. 1 (Neb. Game & Parks Comm'n).

141. 18 U.S.C. §§ 41-47 (1976).

portation, exportation and interstate transportation of these animals was prohibited if their capture violated state or federal law or the laws of a foreign country.[142] However, since state and federal laws prohibiting capture were few and the number of enforcement officials was small, little meaningful protection occurred. Other federal legislation has included the Migratory Bird Treaty of 1918,[143] the Black Bass Act of 1927,[144] the Bald Eagle Act of 1940,[145] and the Fish and Wildlife Act of 1956.[146] These legislative attempts along with others were followed in 1966 by an act which contained the first specific provision for endangered species.[147]

In 1969, amendments were made to the 1966 Act which broadened its coverage.[148] Conservation of foreign endangered species was added. There was increased funding for land acquisitions, the Secretaries of Interior, Agriculture and Commerce were to protect endangered fish and wildlife within their respective jurisdictions, and authority was granted to purchase land solely for the purpose of conserving, protecting, restoring, or propagating native endangered species. The only areas regulated however were those within the jurisdiction of the Departments of Interior, Agriculture and Commerce.

In 1973, Congress passed the Endangered Species Act[149] which expanded protection beyond the 1969 amendments by prohibiting the taking of endangered species of wildlife and fish on all lands within the United States. Other provisions of the 1973 Act which increased protection include protection for threatened as well as endangered species,[150] elimination of ceilings on acquisition of critical habitat areas,[151] and extension of the authority of the Department of Agriculture to assist states in carrying out the purposes of the Act.[152] Various words used in the Act are specifically defined and these provide some guidance as to the Act's scope.

142. *Id.*
143. 16 U.S.C. §§ 703-711.(1976).
144. *Id.* §§ 851-856.
145. *Id.* § 668.
146. *Id.* § 742(a)-(j).
147. The Endangered Species Preservation Act of 1966, 16 U.S.C. §§ 668aa to 668ee (1970) (repealed 1973; replaced by 16 U.S.C. §§ 1531-1543 (1976)).
148. *Id.* §§ 668cc-1 to 6 (repealed 1973; replaced by 16 U.S.C. §§ 1531-1543 (1976)).
149. Endangered Species Act, Pub. L. No. 93-205, 87 Stat. 884 (1973) (codified at 16 U.S.C. §§ 1531 to 1543 (1976)).
150. *Id.* § 1531(b)-(c).
151. *Id.* § 1534.
152. *Id.* § 1535.

"Endangered species" is defined to include any species which is in danger of extinction throughout all or a significant portion of its range. The definition excludes insects determined to constitute a pest whose protection would present an overwhelming and overriding risk to man.[153] A "threatened species" is any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.[154] The term "conserve" means to use all methods and procedures which are necessary to bring any endangered species or threatened species to a point at which the measures provided under the act are no longer necessary.[155] The goal is not merely maintenance of present populations but restoration of populations to a natural state.

Some animals which are found in or migrate through Nebraska are afforded protection under the 1973 Act. The United States Fish and Wildlife Service lists the black-footed ferret and the whooping crane as endangered species. Also protected under the Migratory Bird Treaty with Mexico is the American peregrine falcon. A list of endangered species approved by the Nebraska Game and Parks Commissioners in May, 1976, included the whooping crane, black-footed ferret, American peregrine falcon, Arctic peregrine falcon, Eskimo curlew, and the swift fox. On the threatened list were the interior least tern, mountain plover, southern flying squirrel, lake sturgeon, pallid sturgeon, northern redbelly dace, pearl dace, finiscole dace and brook stickleback.[156]

In addition to the Endangered Species Act, a number of other federal programs relate to wildlife (including fisheries) and habitat retention. For example, reference has already been made to the Army Corps of Engineers' dredge and fill permit power under section 404 of the Water Pollution Control Act Amendments and its potential impact on wetlands.[157] The Soil Conservation Service, too, has a great impact on wildlife through the way it administers technical and financial assistance.[158] And the Fish and Wildlife Service itself has authority and responsibility in a number of areas in addition to endangered species.[159]

153. *Id.* § 1532(4).
154. *Id.* § 1532(15).
155. *Id.* § 1532(2).
156. *See* Neb. Game & Parks Comm'n, Regulations § 6(4) (Wildlife Regs.) (compiled in 16 NEB. ADM'N RULES & REGS. (1975).
157. *See* text accompanying notes 81-82 *supra*.
158. *See, e.g.*, D. SIMMS, THE SOIL CONSERVATION SERVICE 140-141 (1970).
159. *See generally* Comment, *Vanishing Wildlife and Federal Protective Efforts*, 1 ECOL. L.Q. 520 (1971); Palmer, *Endangered Species Protection: A*

Protection of different species under the 1973 Endangered Species Act or any one of a number of other federal wildlife related activities could easily have an effect on Nebraska land usage. An example of one type of impact is illustrated by the 1976 Supreme Court case of *Cappaert v. United States,*[160] in which the state of Nebraska participated on the losing side. In *Cappaert*, water taken from wells on Cappaert's ranch was causing a pool of water in Devil's Hole to decrease. Devil's Hole is a deep cavern located on federal land in Nevada. It contains an underground pool inhabitated by a unique species of desert fish. The drop in the water level decreased the spawning area and reduced the ability of the fish to spawn in sufficient quantitites to prevent extinction. Devil's Hole had been reserved as a national monument by a 1952 Presidential Proclamation. The court's unanimous holding was that the United States, when it reserved Devil's Hole, acquired by reservation groundwater rights in unappropriated appurtenant water sufficient to maintain the level of the pool.[161] Thus, in effect, a private landowner was regulated because of the impact his activities caused to federal land.

Another example of the possible effect on Nebraska land (and water) usage is the proposed United States Fish and Wildlife Service plan to create a wildlife refuge in an area of southcentral Nebraska.[162] The area along the Platte River is being considered for a refuge because it is used by the endangered whooping crane and other migratory birds. Under existing federal law, authority exists to acquire land and easements for the creation of a refuge.[163] This can be done on a willing-seller basis (which is the method the Fish and Wildlife Service indicates it intends to use) or in certain instances through federal use of the power of eminent domain.[164]

Another example of potential land use impact can be seen in the efforts of the United States Fish and Wildlife Service to use groundwater to augment wetland habitat on several units of the National Wildlife Refuge System in southcentral Nebraska. The

History of Congressional Action, 4 ENVT'L AFF. 255 (1975); NAT'L RES. COUNCIL, NAT'L ACADEMY SCI., LAND USE AND WILDLIFE RESOURCES (1970).

160. 426 U.S. 128 (1976). *See* Note, *Expansion of the Reservation of Water Rights Doctrine*, 56 NEB. L. REV. 410 (1977).

161. 426 U.S. at 139.

162. *See* DEPT. OF INTERIOR, ENVIRONMENTAL ASSESSMENT, PROPOSED ACQUISITION AND OPERATION OF PLATTE RIVER NATIONAL WILDLIFE REFUGE NEBRASKA (March 1974).

163. *See, e.g.*, 16 U.S.C. §§ 1501-1534 (1976).

164. *Wildlife Refuge Plan Alternatives Aired*, Lincoln J., July 9, 1974, at 22, col. 1.

pumping is an effort to retard the loss of wetlands in the area and reduce waterfowl deaths from fowl cholera. However, local farmers and the Upper Big Blue and Tri-Basin Natural Resources Districts are opposing the Fish and Wildlife Service's efforts because of alleged adverse impact on groundwater levels.[165]

B. State Programs

While the 1973 Endangered Species Act helps define which species are to be protected, and offers some means of protection, state agencies also have the power and authority to help protect wildlife. The Nebraska Game and Parks Commission and the Natural Resource Districts both have the power to acquire land from private land owners for certain purposes connected with wildlife (including fisheries) protection and enhancement.

The Game and Parks Commission, with the approval of the governor, may acquire land for the protection and propagation of game or as a refuge or sanctuary for birds or fowls either by purchase, lease, gift, or other device.[166] The Commission is also authorized and empowered to acquire real estate bordering on the shore of any lake or artificial reservoir in order to develop public recreation areas and promote the conservation of natural resources.[167] The Commission can use eminent domain with the consent of the legislature to acquire unique natural areas or areas of scientific, historic or recreational value.[168]

The Natural Resource Districts (NRD's) have a more general grant of power: "Each district shall have the power and authority to exercise the power of eminent domain when necessary to carry out the purposes of this act within the limits of the district or outside its boundaries."[169] The purposes of the Natural Resource Districts include "(10) development and management of fish and wildlife habitat, (11) development and management of recreational and park facilities, and (12) forestry and range management."[170]

165. OUTDOOR NEWS BULLETIN, Jan. 20, 1978, at 3-4 (Wildlife Management Inst.). By 1970, 90 percent of the wetlands in the basin had been drained. Pumping by the Wildlife Service during the spring 1977 season was 1,756 acre-feet. By comparison, the 12,000 private wells in the basin pump approximately 3.8 million acre feet per season. *Id.*
166. NEB. REV. STAT. § 81-805 (Reissue 1976).
167. *Id.*
168. *Id.* § 81-815.26.
169. NEB. REV. STAT. § 2-3234 (Reissue 1974).
170. *Id.* § 2-3229.

The twenty-four NRD's vary in the amount of importance they place on habitat improvement. A number of NRD's operate set-aside acre programs, paying farmers to leave acres in grass and game cover,[171] and others have cost-sharing programs which help provide materials for landowners willing to establish habitat areas.[172] Also, many NRD impoundment and water related projects often provide wildlife enhancement as secondary benefits. As interest increases in habitat expansion, more projects will undoubtedly be instituted.

In addition to past activities of the Game and Parks Commission and NRD's to protect Nebraska wildlife, the 1976 passage of the so called "Habitat Bill"[173] (funds for which became available July 1, 1977) has expanded their efforts, and consequently expanded their impact on land use. Implementation of the wildlife habitat improvement program is underway at the Game and Parks Commission, with a fiscal 1977-1978 budget of $2.2 million. The funds, generated mainly from increased hunting and fishing fees, will be funnelled into a number of different areas. The Game and Parks Commission plan has three phases: (1) acquisition of critical habitat, (2) the Natural Resources District private land program, and (3) development of better habitat on public land. Approximately 780,000 dollars is budgeted for acquisition; and with the use of federal funds, 3,500 acres a year could be acquired. The NRD's have been allocated 860,000 dollars to preserve or establish wildlife habitat on private lands, and the remaining approximately 560,000 dollars was programmed for wildlife habitat improvement on existing public lands. Most of the latter habitat work will involve tree and shrub plantings and seeding of grasses and legumes.[174]

Although there are currently few direct impacts on land use—in the sense of controlling private decisions—from wildlife related programs, a number of activities of the Game and Parks Commission and other agencies have spillover effects on land use and land use patterns. The impact of the new Habitat Bill has already been discussed. Another example can be seen in the tree planting efforts of the Clarke-McNary program of the Uni-

171. Interview with Lee Orton, Executive Dir., Neb. Ass'n of Water Resources Districts (Apr. 26, 1978).

172. *Id.*

173. NEB. REV. STAT. §§ 37-101-110, 201-227 (Cum. Supp. 1976).

174. Hornbeck, *Nebraska Adding Land to Habitat Plan*, NEBRASKA AFIELD & AFLOAT, March 1978, at 7 (Neb. Game & Parks Comm'n). A good explanation of Commission plans appears in NEBRASKALAND, October 1976, at 18.

For a description of the accomplishments of the program in 1977, see NEB. GAME & PARKS COMM'N, THE NEBRASKA HABITAT PLAN (1978).

versity of Nebraska and the Game and Parks Commission which resulted in the planting of over 2.5 million trees in the State in 1976, with even more trees to be planted in the years ahead.[175] These trees not only provide habitat and cover, they also help significantly to reduce soil loss from wind erosion. Nebraska also gets federal funds for fisheries and wildlife programs—more than 1.27 million dollars from the Department of Interior in fiscal 1976.[176] And in 1975, Land and Water Conservation Fund expenditures (which include matching state and local funds) totaled more than 2 million dollars.[177] In addition, the state and federal governments manage thousands of acres of public lands and waters within the state in parks, recreation areas, etc., and their management practices can often significantly affect the uses of surrounding land. All of these programs and expenditures are likely to continue, if not expand, and their resulting influence on the economy and land use practices of the region will also continue.

175. *Tree Distribution*, NEBRASKA AFIELD & AFLOAT, May 1976 (Neb. Game & Parks Comm'n).

176. *Excise Tax Aids Fish, Wildlife*, NEBRASKA AFIELD & AFLOAT, April 1976 (Neb. Game & Parks Comm'n).

177. *Wildlife Habitat Improvement Program Being Implemented*, NEBRASKA AFIELD & AFLOAT, June 1976 (Neb. Game & Parks Comm'n); *L&WC Fund Apportions $2,000,000*, July 1976, at 2 (Neb. Game & Parks Comm'n).