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AN EVALUATION OF WATER POLLUTION CONTROL ARRANGEMENTS IN AND BY THE STATE OF ILLINOIS

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CHAPTER I

INTRODUCTION

This is a study of water pollution control in the State of Illinois. The objective of the study is threefold. First the study presents the history of water pollution control in Illinois. Primary emphasis is placed on developments that have occurred since the passage of the Federal Water Quality Act of 1965. The 1965 Act is generally viewed as a stimulant to state water pollution control activities throughout the United States. This study reveals how Illinois responded to the Act.

Second, the study compares the state's current centralized management of water pollution problems with the previous decentralized management approach. The term centralized agency structure or arrangement means that all functions related to water pollution, regardless of the sources--industry, agriculture, or urban--are performed under the jurisdiction of one state agency. The term decentralized agency structure refers to arrangements wherein the authority for pollution control follows normal agency jurisdictional lines. For example, pollution from pesticides and feedlot runoff is dealt with by the state's agriculture department; urban sewer systems by a department of health; and drainage from mining operations by a department of mining.

Third, the study recommends possible improvements in the current system. To set the stage for the study, the economic theories of pollution control are reviewed.

In economic terms pollution control may be viewed as an attempt to compensate for or correct failures in the market system. Under certain conditions the market mechanism does not yield private maximum satisfaction or what economists refer to as "private optimum". In economic theory "private optimum" refers to the most efficient allocation of resources for satisfying the wants of society. Private optimality is realized when resources are allocated so that the marginal benefits derived from consuming a product are equal to the marginal sacrifices incurred in producing the product. The price (P) the consumer pays for a product equals the marginal cost (MC) of its production. This relationship between prices and costs is generally expressed for a multi-product society as:

$$\frac{P_x}{MC_x} = \frac{P_y}{MC_y} = \ldots = \frac{P_n}{MC_n} = 1$$

However, if there are costs associated with production that are not included in the producers marginal cost, the above relationship becomes an inequality. Such an inequality expresses a failure of the market system to allocate its resources in a way that yields a "private optimum". Economist Allen Kneese describes this failure of the market system as follows:

> ...While most extractive, harvesting, processing, and distributional activities can be conducted relatively efficiently through the medium of exchange of private ownership rights, the return of residual mass to the

> environment is heavily to common property resources, like air and water, where the process of private exchange cannot be expected to assign accurate relative values to alternative uses of the resources.[1]

For example, if a manufacturing concern through its production operations emits large amounts of smoke into the air, the effects on nearby citizens could be detrimental. Citizen costs, such as doctor visits and prescribed medication, necessary because of the intensity of the smoke, are not represented in the marginal cost of the firm's product. In economics such citizen costs are considered as costs external to the production process. They are called external costs. They are generated, in the current case, by the production of the detrimental product, smoke. Such detrimental products are called externalities.

The term marginal social cost (MSC) is used to express the inclusion into the total cost of this additional or external cost. The MSC is the sum of the marginal external cost (MEC) and the marginal cost of production--$MSC_x = MEC_x + MC_x$. When the entire MSC is not included in costing a firm's output, the price of the product is not reflective of the "true" costs of production.

$$P_x \quad MSC_x$$

This indicates that some of the costs of production--those attributable to the smoke--are being born socially and are not absorbed by the producers of the product. The subsequent misallocation of resources is

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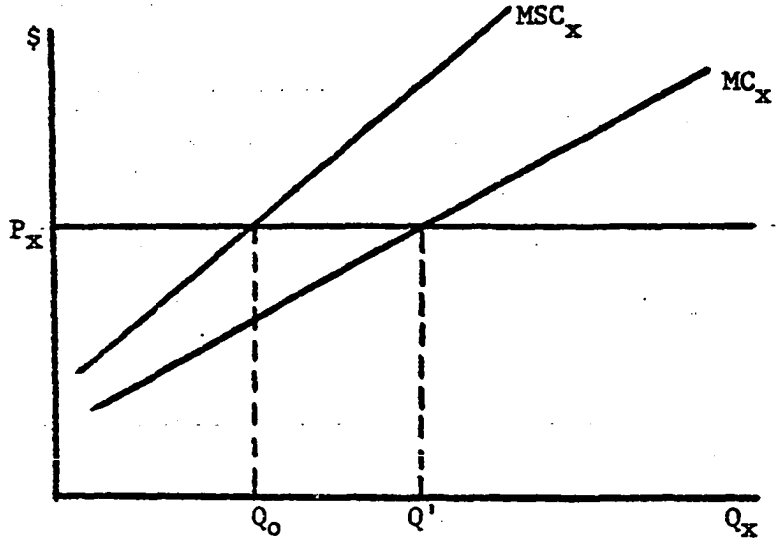
[1]Allen Kneese, "Environmental Pollution: Economics and Policy", The Americal Economic Review, Vol. LXI, (May, 1971), p. 155.

reflected in the diagram below. Q' is the output generated by the firm under normal market conditions--$P_x = MC_x$. The vertical distance between MC_x and MSC_x at each output is the amount of external cost associated with producing the firms product--at output Q', MSC_x P_x. If the firm were to include the marginal social cost as well as the private cost of production, however, output would be restricted to Q_o.. At output Q_o, P_x= MSC_x.



If, on the other hand, the producer had installed air pollution devices and included the cost of such in his costs of production, the price paid by his specific consumers might not reflect the benefits the entire society receives from the clean air. In this case, these specific consumers are promoting a benefit for which they are not paid. To describe this situation it is said that the marginal social benefit (MSB) received from the clean air is greater than the amount of private benefit compensated for in the product price. The socially optimal position for the entire production-consumption process is said to be obtained when the following is met:

$$MSB_x = MSC_x$$

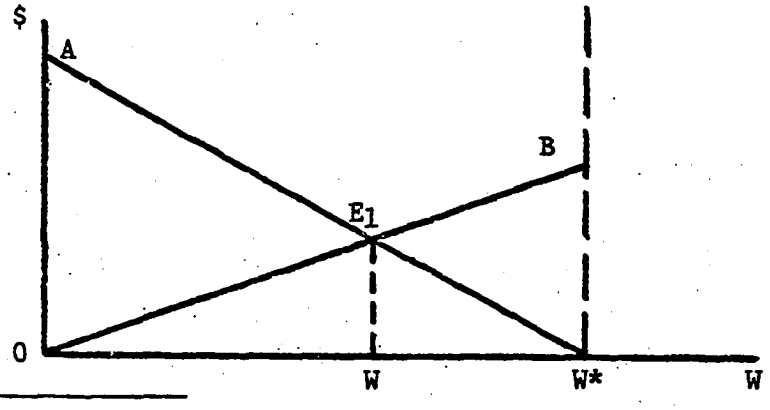
For a multi-good economy this relationship is expressed as:

$$\frac{MSB_x}{MSC_x} = \frac{MSB_y}{MSC_y} = \ldots = \frac{MSB_n}{MSC_n} = 1$$

Paul Barkley and David Seckler summarize externalities as follows:

> All external effects have two properties: interdependency--one person's behavior creates a cost or benefit to other persons; and a lack of compensation--the one who creates the cost is not made to pay for it, nor is the one who creates a benefit completely rewarded for it.[2]

Charles Cole, in his book, Microeconomics: A Contemporary Approach, describes the pollution problem using the concept of externalities. Cole supposes the existence of a stream with many uses--drinking, swimming, boating, viewing, and disposing.[3] He asserts that there are several industries dumping effluents in the amount of OW* into the stream daily as presented in the figure below. The use of the stream by the industrial operations is transferred at a zero price. The resulting pollution is said to be harmful to the nonindustrial users.



[2]Paul Barkley and David Seckler, Economic Growth and Environmental Decay, (New York: Harcourt, Brace, Javanovich, Inc., 1972) p. 101.

[3]Charles Cole, Microeconomics: A Contemporary Approach, (New York: Harcourt, Brace, Javanovich, Inc., 1973) p. 475.

Because of the harmful nature of these effluents, the nonindustrial users are willing to pay to have the strength of the effluents diminished. A schedule of the marginal amounts these citizens are willing to pay is represented by the "marginal valuation curve", OB. The total amount which they are willing to pay is represented by

$$\int_0^{W^*} f(B) = OBW^*$$

This amount of money would be used to encourage the industrialist to reduce the quantity of effluents to zero. The industrialists, however, receive considerable private benefit from the use of the stream as a medium for waste disposal. Because of this value, to lower the effluents to zero the industrialists require an amount equal to

$$\int_0^{W^*} f(A) = OAW^*$$

Attention is now drawn to the fact that $OAW^* > OBW^*$. The industrialists require a greater sum to drop the effluents to zero than the nonindustrialists are willing to pay.[4] All is not lost, however, because of this difference. The marginal valuation curves AW* and OB intersect at E_1. Cole concludes, "...at this point (E_1) the nonindustrial users' marginal valuation of what they must be paid to remove the quantity W, W* units of waste from stream each day".[5] This equilibrium is obtained by bargaining between parties.[6]

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[4] Ibid., p. 473.

[5] Ibid.

[6] A detailed discussion of the bargaining process is presented in an article by R.H. Coase, "The Problem of Social Cost", Journal of Law and Economics, Oct. 1960.

The equilibrium is called a Pareto-relevant solution to the externalities problem. Robert Bish discusses the Pareto-relevant position as follows:

> ...Such externalities,..., provide an opportunity for action that can make both the generator of the externality and the affected individual better off or, at minimum, one of the parties is better off while the other is no worse off.[7]

Obviously in the current case, dealing with the stream's uses, to move away from E_1 would cause a loss for one party or the other. This market solution above produces a welfare gain to both parties of an amount equal to OE_1A. A market solution, however, is not so readily availabale as it seems from the example above.

The above analysis leaves certain questions to be answered: How does one determine the shape and position of the marginal valuation curves? How are the citizens and industrialists brought together? How can the citizens be sure the effluent levels will be maintained at the agreed amount of OW? Answers to questions such as these do not come without some effort and cost. The costs of obtaining the required information is referred to as transaction costs (TC). An example of these is costs for obtaining information on the harmful effects of the pollutants on the citizens. Others include those in obtaining information on the amounts and types of pollutants present. Additional costs in the form of policing fees for assuring compliance and contractual fees if the parties reach a formal agreement are also possible. When all such aspects are dealt with, the transaction costs can be totaled. The transaction costs are

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[7]Robert Bish, The Public Economy of Metropolitan Areas, (Chicago: Markham Publishing Company, 1971) pp. 19-20.

then compared with the community's welfare gain (WG) steming from such actions. This comparison tests the feasibility of undertaking the anti-pollution project. The project is generally considered economical or worthwhile if the welfare gain is at least equal to the total transaction costs:

$$\frac{WG}{TC} \geqslant 1$$

This relationship is called a cost-benefit ratio. It yields the welfare gain per unit of transactions cost. The conclusion from the theory is that some arrangement must be made to correct the general failure of the market system to deal with externalities. There is a need for some control.

At this point three questions regarding pollution control seem relevant. What methods of control should be used? What type of legal authority should be involved? What agency arrangements--centralized or decentralized--should be provided for?

As methods of control, many economists opt for use of pollution taxes, investment subsidies via tax credits, or user charges.[8] These approaches are given as an alternative to direct agency controls. Economist R. O. Zerbe assails direct controls by pointing out two areas wherein regulatory agencies generally become inefficient. He notes that

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8 For discussions supporting the idea of taxes or environmental user charges see Joe S. Bain, Environmental Decay, (Boston: Little Brown Co., 1973) p. 41; Edwin G. Dolan, TANSTAAFL: The Economic Strategy for Environmental Crisis, (New York: Holt, Rinehart, and Winston, 1972) p. 33; and Allen Kneese, "Environmental Pollution: Economics and Policy", The American Economic Review, Vol. LXI, (May, 1971) pp. 155-156.

agencies tend to: 1) have cumbersome and inefficient legal enforcement arrangements[9] and 2) lose sight of their purpose.[10] Zerbe advocates the use of taxes as a means of control.

The appeal of the tax system stems from the tax being viewed as nothing more than a price on pollution. This "price" is more in line with the allocation of resources through the market system than is a system of direct control via some regulatory agency. This general optimism over the use of a sumptuary tax (price) system as a means of pollution control might not, however, be warranted. Speaking to the effectiveness of sumptuary taxes used by states on tobacco and alcohol, James Maxwell notes:

> In fact, in an affluent society the taxes are pushed not hard enough to secure much diminution but hard enough to secure a large revenue.[11]

The statement indicates that a tax, like an agency, can become separated from its original purpose. Maxwell further demonstrates his skepticism of a sumptuary tax system as a means of regulating consumption noting that:

> ...Taxation raises the price of the taxed product. In itself, this may not be an effective curb on consumption. But it is the only power of a sumptuary tax, and if government is not satisfied, other steps are available.[12]

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[9] R. O. Zerbe, "Theoretical Efficiency in Pollution Control", Western Economic Journal, Vol. IX, (Dec., 1970) p. 369.

[10] Ibid., p. 375.

[11] James Maxwell, Financing State and Local Government, (Washington D. C.: Brookings Institution, 1969) p. 87.

[12] Ibid., p. 213.

These objections to the possible effectiveness of a tax system, in essence, seem to remove taxes from the realm of being the panacea for pollution problems. The question of method of control is left, then, as an empirical one. This study surveys the use of non-tax regulatory techniques as they have been applied by Illinois.

The question of the legal basis for pollution control can be considered at two levels: 1) the legal relationship between the various levels of government--federal, state, and local; and 2) the legal relationship between agencies within a given state. There seems to be considerable agreement on the roles of each level of government. Elizabeth Haskell concludes that the states are "strategically situated" to deal best with pollution problems.[13] Haskell indicates that local governments are "... too close to the economic and political pressures that create the problems ...." While the federal government is "...too far away from the environmental problems."[14] The federal government is envisaged as the stimulator of state activity and the agent to deal with interstate problems.[15]

The federal government, in acting as the states' prime mover, passed what is considered the most significant piece of federal legislation in the area of water pollution control, The Federal Water Quality Act of 1965. Under this act, the various states are required to hold hearings,

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[13]Elizabeth Haskell, "New Directions in State Environmental Planning", Journal of the Americal Institute of Planners, Vol. XXXVII, (July, 1971) p. 258.

[14]Ibid.

[15]For support of this general position see the Environmental Protection Agency, Guidelines: Water Quality Management Planning, (Washington D.C.: U.S.G.P.O., 1971) and Jack Hershleifer, Water Supply: Economics Technology and Policy, (Chicago: University of Chicago Press, 1969) p. 224.

adopt water quality criteria for interstate waters, and adopt plans for implementation and enforcement of the water quality standards. The deadline for compliance was set at June 30, 1967. The thrust of the legislation allows the states to solve their own pollution problems. This Act exemplifies the idea that the states are in the best position to oversee their specific pollution problems. A couple of questions remain, however, in regard to the interagency relationships within a given state. Should agency arrangements be centralized and oversee many segments of the economy--agriculture, manufacturing, mining, and municipalities? Should the organization be decentralized--multi-agency--allowing each segment of the economy to have its own agency? These questions seem to be ignored. The literature generally does not deal with the type of agency arrangements most effective in implementing the various methods of pollution control. For example, Robert Ayres and Allen Kneese in an article on the production-consumption process note three critical control considerations: 1) the different environmental media--air, land, and water--cannot be considered separately; 2) an ad hoc approach to problems is not adequate; and 3) environmental programs must be planned with the effects of residuals in mind.[16] All three of these considerations lead to the conclusion that a centralized management approach is needed. No suggestion as to specific form and authority is, however, given in their study. In a study on water resources Jack Hershleifer states specifically that "... centralized

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[16] Robert Ayres and Allen Kneese, "Production, Consumption, and Externalities", The American Economic Review, Vol. LIX, (June, 1969) p. 282.

decision making is required..." to assure efficient use of water resources.[17] Again, however, no indication of the structure of such management is given. Another statement is made by N. William Hines in anaarticle on legal aspects of water pollution control:

> ...The success of a state's control over the quality of its water is heavily dependent upon the comprehensiveness of its pollution legislation and the character and efficiency of the regulatory agency administering the control program.[18]

Still, little is said about the relative importance of a specific type of agency arrangement. There is a void in the literature. A Ph. D. dissertation done at the University of Oklahoma points out some shortcomings of Oklahoma's multi-agency approach to water pollution control.[19] As noted earlier, Illinois has chosen a centralized agency to control water pollution. This study analyzes and compares water pollution activities by the State of Illinois under the state's decentralized agency approach and the present centralized agency approach.

Methodology

This is basically a historical study. Historical detail is necessary for comparing the current pollution control efforts with those of the previous system. The time period covered in the study is 1960 to 1972 inclusive. Because of the historical nature of the study, however, a

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[17]Hershleifer, Water Supply, pp. 222-223.

[18]N. William Hines, "Legal and Regulatory Aspects of Water Pollution Control", in Water Pollution Control and Abatement, ed. by Ted Wilrich and William Hines, (Ames, Iowa: Iowa State University Press, 1965), p. 55.

[19]Walter D. Johnson, "Water Pollution Control in and by the State of Oklahoma", (unpublished Ph. D. dissertation, University of Oklahoma 1971).

review of activities prior to 1960 is presented. The criteria used in evaluating the state's commitment to abating water pollution entails four basic areas: 1) legal and organizational arrangements, 2) financial commitment, 3) manpower commitment, and 4) enforcement and surveillance activities.

The attitude of a state regarding a given problem is generally reflected in its statutes. Illinois Statutes are surveyed from 1900 through 1972 to give an indication of the state's envisaged role in controlling water pollution. Also important is the way legal authority has been distributed among the various state agencies as the laws have been enacted.

Secondly, the state's record of financial commitment to pollution control is studied. Financial commitment is viewed as an indicator of the earnestness of the state's endeavor to meet its stated goals. Two considerations are the amounts and sources of funds made available. Past financial records of some of the state's agencies are unavailable in the detail needed. In these instances, estimates are made. The basis and method for making the estimates are discussed in the study where appropriate.

The state's manpower commitment is the third area of concern. Like the financial aspects, manpower resource allocations are crucial to the control of water pollution. The type and number of personnel assigned to water pollution control should reflect the amount of experience applied to the problems. As is the case with financial data, manpower estimates are made when necessary.

The fourth and final area of concern is based on the preceding three areas. This area is the state's record with respect to enforcement and

surveillance. One measure of the enforcement record is the types and amounts of money penalties assessed by the state in violations. Also important is the general tone of legal opinions and orders issued by the enforcing agency. A summary of each of these opinions was compiled by the writer and is presented to demonstrate the forcefulness of the state's commitment. These opinions and orders are presented in the words of the ruling authorities where appropriate to capture the true tone of those authorities.

Once these four areas are viewed, a summary of the various state agency's activities is made. Considerations required to judge the relative effectiveness of the state's agency arrangements in combating pollution prior to and after July, 1970 are also presented. Based on the judged weaknesses and strengths of the current agency arrangements, recommendations are made.

Format

The data presented in the study come from published and unpublished sources. The three major sources for ideas and data presented in the study are the files of various state agencies, interviews with state officials, and official state reports. Due to a lack of time and money, industry and municipal sources were not consulted.[20]

The first chapter serves as an introduction. Chapter Two serves

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[20]Although representatives of these groups were not contacted directly, a group of letters from industrial associations and individual firms were reviewed in the files of the Pollution Control Board. Inasmuch as the contents of such letters are considered private property under the law, the letters are neither quoted nor reporduced in this study. The letters did, however, provide the writer with considerable insight into the attitudes of industrialists concerning the nature and "spirit" of the legislation.

as a general history of the development of water pollution control in Illinois. This history depends heavily on the Illinois State Laws and the Annotated Statutes of Illinois. The presentation also depends on the past annual reports and studies done by personnel in the various state agencies. To capture the tone of the developments, however, personal interviews with Illinois Representative George Burditt, sponsor of the Environmental Protection Act of 1970 and other state officials were necessary.

The state's record of financial commitment is presented in Chapter Three. The financial data are taken from past and present state documents such as the Budget of the State of Illinois. Also important at this point are the records of the agencies involved in water pollution. Much of the financial data presented come from letters and personal interviews. The persons interviewed to obtain these data are as follows: Mr. Gordon Brenne, budget analyst for the Enviornmental Protection Agency; Sandra Wiley, budget analyst for the Pollution Control Board; and Doris Smith of the Illinois Department of Public Health. Mr. Larry Bulloch of the Illinois Department of Local Government Affairs and Mr. William Skovill of the Illinois Department of Revenue provided information concerning tax rebates.

Chapter Four includes a record of Illinois manpower commitment to water pollution control. Some of the manpower data presented are estimates. Assistance in developing these estimates was received from Mr. William Harth, Director of the Division of Fisheries of the Department of Conservation and Mr. George Lane, Director of the Division of Oil and

Gas Conservation of the Department of Mines and Minerals.

Chapter Five entails a discussion of past and present surveillance and enforcement efforts by the state. This record is used to compare one surveillance-enforcement scheme with the other. The information sources consulted concerning surveillance include the various agencies' annual reports, federal reports of pollution caused fish kills, and personal interviews. The state's enforcement record is primarily taken from Illinois Pollution Control Board Opinions. The Opinions contain the detail and substance of every case involving water pollution. Where additional detail is required in the study various staff members are cited. Three lawyers serve as supplemental information sources: Lee Zelle, of the Environmental Protection Agency; Marvin Mednitz, Pollution Control Board; and Joseph Karaganus, Illinois Office of the Attorney General. Consultations with Mr. Clarence Klassen, one time Technical Secretary of the Sanitary Water Board and first Director of the Environmental Protection Agency and Mr. Richard Nelle, Chief Sanitary Engineer for the Environmental Protection Agency also prove valuable at this point.

Chapter Six is a summary of the state's general record of water pollution control. In addition, comparisons are made between the new centralized agency approach and the previous multi-agency approach, as well as recommendations as to how the current system can be improved.

CHAPTER II

ILLINOIS WATER QUALITY CONTROL: PAST AND PRESENT

The passage of the Environmental Protection Act of 1970 drastically changed water pollution activities in Illinois. The 1970 Act provided the statutory basis for implementing a centralized agency approach. Prior to 1970, water pollution concerns were divided among various agencies of the state. The legislative move toward a centralized approach was a reaction of the legislature to the alleged "ineffectiveness" of the previous decentralized or multi-agency arrangements.[1] The seeds for this change were sown during the 1960's. The initial impetus for change was prompted by the passage of the Federal Water Quality Act of 1965. As noted in Chapter I, this federal legislation required the states to upgrade and enforce water quality standards. Valuable benchmarks for evaluating water pollution control as it exists today are provided by an examination of Illinois state laws and state pollution control agencies pre and post 1965.

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[1] Based on a personal interview with Joseph Karaganus of the Illinois State Attorney General's Office, November, 1972.

Organization Evolvement Prior to 1965

A first step in studying the evolution of a legal system involves an investigation of the system's justification. The legal justification for water pollution laws in the eastern United States and Illinois comes from English Common Law. The doctrine is based on riparian rights.[2] Under this doctrine, water rights are restricted to land owners whose property fronts on a watercourse.[3] Each riparian owner has an equal right to the water regardless of the amount of land owned contiguous to the waterway. William Hines notes the classic statement of riparian rights: "...it is the right (of each riparian owner) to have the water flow by his land undiminished in quantity and unimpaired in quality."[4] The essence of this statement, if literally interpreted, is never to allow any person to use the waterway or its contents. A practical interpretation of the doctrine allows for legal action as soon as there has been a "...recognizable diminution in the quality or quantity of the riparian waters"[5] Successful water pollution abatement and control efforts

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2 William Hines, "Legal and Regulatory Aspects of Water Pollution Control", in Water Pollution Control and Abatement, ed. by Ted Willrich and William Hines (Ames, Iowa: Iowa State University Press, 1967) p. 52.

3 Anonymous, "Water Pollution", Columbia Law Review, Vol. 70, (April, 1970) p. 735.

4 Hines, Legal and Regulatory Aspects of Water Pollution", p. 56.

5 Columbia Law Review, "Water Pollution", p. 736.

have, however, required an even further extension of this concept of riparian rights.

An example of the extension of water use rights was in the case of Richards v. Village of Edinburg.[6] The issue in this case was the indiscriminate dumping of refuse by an industrial plant into a creek. The result was foul odor and insect infestation. Damages were filed for and awarded to a non-contiguous (to the waterway) landowner. This extension of the riparian doctrine fell under the legal theory of nuisance. This theory, as applied above, is summarized as follows:

> ...Nuisance is classified...as an invasion of a particular type of interest causing a specific kind of harm. Interference with a proprietor's use of water running through his property or causing consequential annoyance to a nearby landowner by the pollution of water has generally been accorded relief by this cause of action.[7]

Another legal theory upon which cases were tried is the "reasonable use" theory. This theory is based on the idea that streams, although natural, exist for the use and benefit of man.[8] This theory grants each riparian owner reasonable use of a given stream or body of water. In terms of water pollution, before a water use was considered unreasonable, a complaining riparian owner must have suffered actual and measurable injury.[9]

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6 Ibid., p. 739.

7 Ibid.

8 Ibid., p. 737.

9 Ibid.

The word actual, however, was subject to interpretation. In an early case in Illinois the court held that the injury from water pollution must be more than "nominal or immaterial" before an injunction to stop pollution could be obtained.[10] This judgement was in line with the then prevailing attitude on pollution control. The editorial staff of the Columbia Law Review describes the attitude at that time as follows:

> Because of the relative disinterest in the protection of natural resources which existed during America's rise as an industrial power, the nineteenth century courts considered most water pollution claims to be damnum absque injurin when balanced against most industrial uses. A riparian was always given preference in the satisfaction of his natural wants,... However, during the formative period of America's industrial development, the riparian's rights were often considered to be restricted to these domestic uses.[11]

In essence, the commitment to enforcement by the courts was somewhat jaundiced due to the national attitude toward economic growth.

The Illinois Legislature's first statute dealing specifically with water pollution control was the Rivers and Lakes Commission Act of 1911.[12] The Act established the Illinois Rivers and Lakes Commission. The members of the commission were appointed by the Governor with the consent of the Senate. The commission's mandate relative to water pollution was "...to see that all of the streams and lakes of Illinois, wherein the

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10 See the discussion of Tetherington v. Donk Brothers Coal Company in Fred Mann, Harold Ellis, and N.G.P. Krausz, Water Use Law in Illinois, (Urbana, Illinois: University of Illinois Press, 1964) p. 26.

11 Columbia Law Review, "Water Pollution". p. 737.

12 Illinois, Statutes (1911), 115.

State or its citizens have rights, are not polluted or defiled by the deposit or addition of any injurous substances..."[13] Methods of enforcement generally included under the Act were as follows: 1) an order by the commission to cease and desist pollution; 2) a trial hearing before a circuit court; and 3) a fine of not less than $100 nor more than $1,000.[14]

Six years after the passing of the Rivers and Lakes Commission Act, the State Civil Administrative Code of 1917 was passed.[15] This code changed the entire administrative arrangement for the Illinois government by creating departments. The various departments' water pollution activities authorized under the code are discussed below.

Departments of Agriculture and Conservation

Under the Civil Administrative Code, the Department of Agriculture was given the power to "take all measures necessary for the preservation "...of fish, game birds, and other wild birds."[16] This power included the monitoring of water pollution that might affect the livelihood of the game of the streams and lakes of Illinois. In 1925, this provision was amended to give these powers to the newly created Department of Conser-

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13 Ibid., Sect. 14, 118-119.

14 Ibid., Sect. 26 (a), 121.

15 Illinois, Statutes (1917), 2.

16 Ibid., Sect. 40, 20.

vation.[17] The Department of Conservation was mandated to "...exercise the rights, powers, and duties conferred by law and to take such measures as are necessary for the investigation of, and the prevention of pollution of and engendering of sanitary and wholesome conditions in rivers, lakes and streams..."[18] In this Act the conservation personnel were encouraged to work in conjunction with any other state departments authorized to prevent stream and water pollution. This latter function has remained essentially unchanged. Primary responsibility for pesticide and herbicide control still remain with the Department of Agriculture.

Department of Mines and Minerals

Acid runoff into streams and saltwater emissions from unplugged or operating gas and oil wells have been a substantial source of water pollution. These sources of pollution come under the jurisdiction of the State Department of Mines and Minerals. The State Mining Board was created in 1941 to act for the Department in dealing with mine pollution. The specific mandate of the Mining Board in dealing with water pollution was to prohibit "waste".[19] Waste was defined in the Act as any "...unreasonable damage to under ground or surface fresh or mineral water..."[20] One

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17 Illinois, Statutes (1925), Sect. 63 (a), 599-600.

18 Ibid.

19 Illinois, Statutes (1941), 934.

20 Illinois, Revised Statutes, Annotated (1971), Ch. 104, Sect. 65,93.

of the primary sources of such waste was abandoned oil wells. The 1941 Act gave the Board authority to require that all abandoned oil wells be plugged according to the specifications of the law. The Board had the authority to require an owner, operator, or manager, of a well drilled for oil, gas, or any other purpose to post a bond of $1,000 for each well or a blanket bond of $10,000 for all such wells.[21] The purpose of such bonds was to cover any damages caused by the well. If ownership of a given well was unknown, or the known owner failed to comply with a Board order concerning pollution, the Department ordered the well capped within 30 days after the discovery of the violation. This Board authority remained essentially unchanged from 1941 to 1967.

The Department of Public Health

The Department of Public Health was created under the Civil Administrative Code of 1917. At this time the State Board of Health was authorized to act in an "advisory capacity" in areas dealing with sewage treatment facilities.[22] The Board was to "...exercise supervision over nuisances growing out of the operation of such..." facilities and to "...make, promulgate and enforce rules and regulations relating to such nuisances."[23] The Code also gave the Board authority to make any examinations

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21 Ibid.

22 Illinois, Statutes (1917), Sect. 55, art. 3, 28.

23 Ibid.

including chemical, biological, and bacterial, deemed necessary to protect the "security of life and health in any locality in the State."[24] The authority designated above was amended in July of 1971 by Senate Bill 620.[25] Under this 1931 amendment, the State Board of Health was authorized to prepare and enforce regulations in instances where sewage treatment facilities interfered with the satisfactory quality of water for drinking purposes.[26] The Board was further authorized to regulate the capping of abandoned water wells to prevent ground water contamination; to examine public swimming pools and public bathing facilities; and to perform other duties related to health in general.

In July of 1957, the Department of Health was also authorized to deal with the developing problems of radiation pollution and disposal.[27] This initial legislation gave the Department power over the selection of sites to locate facilities which might create a radiation hazard. This power was strengthened by Senate Bill 757 in August of 1963.[28] At this

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24 Ibid., Sect 55, art. 6, 28.

25 Illinois, Statutes (1931), Sect. 55, 881.

26 Ibid.

27 Illinois, Statutes (1957) Sect. 55.32, 1169.

28 Illinois, Statutes (1963), Sect. 55.32, 3020.

time the State Board of Health was authorized not only to register and inspect such facilities, but to license and control all radiation sources in the state.

Sanitary Water Board

Until the late 1920's, the water pollution authority of Illinois state departments and agencies was administratively fragmented. In 1929, however, the General Assembly passed a statute creating the State Sanitary Water Board (SWB).[29] According to Mr. K.C. Klassen, Technical Secretary of SWB from 1929 to 1970, this legislative action was the "...first in the United States to recognize the effect of water pollution and its control (as) more than (a matter) of public health."[30]

The Sanitary Water Board was composed of the Directors of the Illinois Departments of Public Health, Agriculture, Conservation, and Public Works and Buildings.[31] (The latter was originally designated as the Department of Purchases and Construction.) In addition to the aforementioned department heads was one representative from industry.[32] This industry Board member was selected by the Governor. The Board members served on a

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29 H.R. 766, 57th General Assembly, 1st Session (1929).

30 K.C. Klassen, an untitled and unpublished paper, p. 1.

31 Illinois, Revised Statutes, Annotated, Ch. 19, Sect. 145.3, 405.

32 Ibid.

part-time basis and without compensation for their duties. A 1951 amendment to the Sanitary Water Board Act of 1929 added to the Board one representative from local government.[33] The Chief Sanitary Engineer of the Department of Public Health was designated to serve as technical secretary of the Board.

The purpose of the Sanitary Water Board, as stated in the title of the 1929 Act, was to ..."control, prevent and abate pollution of the streams, lakes, ponds and other surface and underground waters in the state."[34] Pollution was defined in the Act to mean:

> ...such alteration of the physical, chemical or biological properties of any waters of the State, or such discharge of any liquid gaseous or solid substance into any waters of the State as will or is likely to create a nuisance or render such waters harmful or detrimental or injurious to public health, safety or welfare, or to domestic, commercial industrial agricultural, recreational, or other legitimate uses, or to livestock, wild animals, birds, fish or other aquatic life.[35]

As can be seen from this definition, the authority of the Sanitary Water Board included concerns of each of the Departments comprising the Board's membership. Most of the Act's 17 sections dealt with the design, permit issuance, and construction specifications for sanitary sewage systems. The duties required by the SWB in implementing the Act were generally performed by the Department of Public Health's Bureau of Stream

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33 Illinois, Statutes (1951), Sect. 3 (b), 1463.

34 Illinois, Statutes (1929), 386.

35 Illinois, Revised Statutes, Annotated, Ch. 19, Sect. 145.2, 403.

Pollution. The Bureau consisted of a staff of technical, non-technical, and clerical personnel. The Bureau was directed by the Chief Sanitary Engineer. The Bureau's functions were to:

> ...provide the basic personnel necessary to carry out the provisions of the Sanitary Water Board Act as specified in the statutes. . . . . .
> . . . . . .
> The bureau (was) responsible for investigating and conducting day-to-day activities for the Sanitary Water Board and prepare to assist in preparation of all formal actions taken by the Board.[36]

The primary political jurisdictions dealing with such facilities were Sanitary Districts and River Conservancy Districts. A Sanitary District was defined as any area within the boundaries of two counties having within its limits at least two cities or villages with "...an aggregate population of not less than thirty-five hundred inhabitants."[37] This designation allowed the rural and smaller towns and villages to take advantage of the benefits of having such districts. These were single purpose Districts. They served as a taxing body to facilitate, construct and manage sewage treatment facilities for the entire district. The River Conservancy Districts were established on a basis similar to that of the Sanitary Districts. The River Conservancy District, however, had some ten general functions, one of which was the prevention of stream pollution

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36 Illinois Department of Public Health, 47th Annual Report: Fiscal Year 1963-1964, (Springfield, Illinois: Illinois Department of Public Health, 1964) pp. 70-71.

37 Illinois, Statutes (1945), 716.

from sewage treatment facilities.[38] These different districts functioned as the policing agents for the Sanitary Water Board.

As indicated above, the Sanitary Water Board was authorized to "... examine and investigate the sanitary quality of and establish standards of purity" for any of the streams, lakes, ponds, and other surface or ground waters in the State.[39] Section 12 of the Act authorized the State Attorney General's Office to act as enforcement agent for the State of Illinois in cases of violations of the Act.[40] The legal justification for such actions was the law of nuisances.

The essence of the creation of the SWB was to move toward centralizing the authority and control of water pollution. Each of the Board's constituent departments was placed under SWB authority. In regard to the Department of Public Health, the SWB became the authority over all matters in the construction operation and inspection of sewage treatment facilities. The functions of permit issuance and construction of public water supplies, swimming pools, nuclear power plants, and water wells remained, however, with the Department of Health. Relative to the Department of Conservation The SWB became the primary body in charge of pollution caused by fish kill cases.

> ...the Board after consultation with the Department of Conservation shall through the

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38 Mann, Ellis, and Krausz, Water Use Law, pp. 161-162.

39 Illinois, Statutes (1929), 389.

40 Ibid.

> Attorney General, bring an action against such person (polluter) and recover the reasonable value of the fish or aquatic life destroyed by ...pollution.[41]

Any funds recovered from fish kills were to be placed in the Game and Fish Fund in the State Treasury.

The SWB's authority over affairs involving Sanitary Districts and the Department of Mines and Minerals was somewhat restricted by the 1951 amendment to the 1929 Act as follows.

> 15-A ...Nothing in this Act (SWB Act) shall be construed to limit or supersede the provisions of an Act in relation to oil, gas, coal and other surface and underground resources..., and the powers therein granted to prevent...pollution of fresh water supplies by oil, gas or water or oil field wastes.
>
> 16 ...Nothing in this Act contained shall apply to or be effective within the territorial limits of or be construed in any manner to affect the property, real, personal or mixed, wherever situated,..., nor affect the jurisdiction, rights, powers, duties and obligations of any existing sanitary districts which now has a human population of one million or more within its territorial limits.[42]

The specific wording of both of these paragraphs left little room for interpretation. The State Mining Board kept its enforcement position. Also the one sanitary district in Illinois with "one million persons or more", The Chicago Sanitary District, likewise remained autonomous. After the 1951 amendment, the authority of the SWB remained intact until

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41 Illinois, Statutes (1951), Sect. 13, art. b, 1469-1470.

42 Ibid., Sect 15-A and Sect. 16, 1470.

the passage of the Federal Water Quality Act of 1965.

In summary, the basic structure for the current water pollution legislation was developed at three different times -- 1911, 1917, and 1929. The Illinois Rivers and Lakes Act of 1911 established the first statement of purpose directed at maintaining the quality of waters in Illinois. This was followed by the passage of the Civil Administrative Code of 1917. This legislation established the various departments and assigned each a specific jurisdiction in dealing with water pollution. In 1929, the creation of the Sanitary Water Board, was an attempt at centralizing the surveillance and enforcement of water pollution regulations. The SWB dealt with the construction and permit issuance of sewage treatment facilities. Throughout this time from 1911 to 1965, the primary responsibility for litigating complaints in the courts rested in the hands of the State Attorney General.

Reaction of the State of Illinois to the Federal Water Quality Act of 1965

As noted in Chapter I, the Federal Water Quality Act of 1965 (PL 89-234) required the states to: 1) hold hearings relative to water quality, 2) adopt water quality criteria for interstate waters, and 3) adopt plans for the implementation and enforcement of water quality standards.

The initial response of Illinois to PL 89-234 was to merge the Chicago Sanitary District with the SWB in areas dealing with the enforcement of the proposed water quality standards. Without this the Chicago Sanitary District would not have been eligible for federal

financial aid for sewage treatment plant construction. The amendment was made to the SWB Act, Section 16, as previously shown:

> ...obligations of any existing sanitary districts which now have a population of 1,000,000 or more within its territorial limits, except that water quality standards shall be adopted and enforced by the Sanitary Water Board within such sanitary districts, and except that the Attorney General has the power and authority to commence actions and proceedings to prevent water pollution...[43]

A similar amendment to Section 15-A was passed in 1967 to limit powers of the Mining Board in pollution cases wherein adopted water quality standards had been violated.[44]

In further response to PL 89-234, the Sanitary Water Board held hearings and adopted a comprehensive set of water quality standards. Water quality standards are used to establish policies for prevention, abatement and control of water pollution. This is done by defining the water quality requirements for a given body of water based on present and expected future uses of that water. Standards are comprised of rules and regulations establishing water quality criteria for every interstate stream and lake and for all interstate waters. (A presentation of the major interstate waters subject to PL 89-234 authority can be found in Figure 1.) In every case the criteria are consistent with the use(s) of the water in question. Uses included are: public water supplies, aquatic

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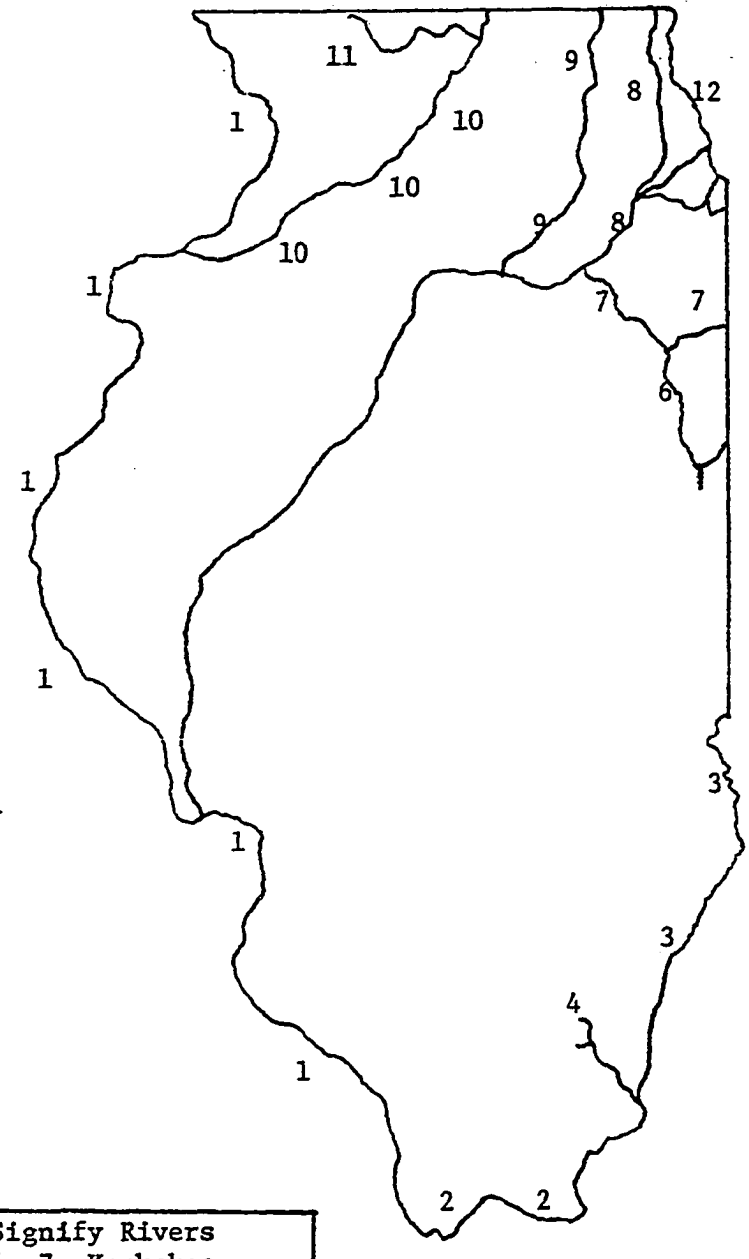
43 Illinois, Statutes (1967), Sect. 1, § 16, 763-764.

44 Ibid., Sect. 1 § 15-A, 3331.

FIGURE 1

INTERSTATE WATERS SUBJECT TO PROVISIONS OF
THE FEDERAL WATER QUALITY ACT OF 1965



Numbers Signify Rivers	
1. Mississippi	7. Kankakee
2. Ohio	8. Des Plaines
3. Wabash	9. Fox
4. Saline	10. Rock
5. Illinois	11. Pecatonica
6. Iroquois	12. Lake Michigan

life, recreation, and industrial water supplies.[45] Water quality standards state that no waste is to be discharged into any waters of the state without first being given the treatment necessary to prevent pollution. To insure this there are industrial and sewage treatment requirements worked into the standards.

The adoption of these standards by the State of Illinois occurred in three steps. The first step established the water quality criteria for the state's nine river basin areas.[46] These criteria set forth the minimum oxygen requirements for the various uses of water noted above. The first set of these criteria was established in September of 1966. The final set was approved in June of 1967. The second step in establishing standards was the adoption of plans for implementing the established water quality criteria. The first of these implementation plans was submitted in March, 1967 and the last in January, 1968. Once the water quality standards were developed and implementation plans

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45 Illinois Sanitary Water Board, Rules and Regulations Water Quality Standards, SWB-7 through SWB-15.

46 The established river basins and corresponding rules and regulations are as follows: Illinois SWB Rules and Regulations SWB-7 covers the interstate waters of Lake Michigan and Little Calumet River, Grand Calumet River and Wolf Lake; Rules and Regulations SWB-8 covers the interstate waters of the Illinois River and lower sections of DesPlains River; Rules and Regulations SWB-9 covers the interstate waters of the Wabash River and tributary streams crossing into Indiana; Rules and Regulations SWB-10 covers the Ohio River and the Saline River; Rules and Regulations SWB-11 covers Rock River, Fox River, DesPlaines River (portions), Kankakee River; Rules and Regulations SWB-12 covers the Mississippi River--common boundary between Illinois and Iowa; Rules and Regulations SWB-13 covers the Mississippi River between Illinois and Missouri; Rules and Regulations SWB-14 covers all interstate waters exclusive of interstate waters; Rules and Regulations SWB-15 covers the Chicago River, the Calumet River, and the Calumet Harbor Basin.

enacted, the Board began to carry out its mandate -- the prevention of water pollution through the construction of adequate sewage treatment facilities. According to Mr. Klassen, the changes in the standards resulting from the FWQA of 1965 caused many of the treatment plants to upgrade their capacities.[47] Following the passage of the FWQA of 1965, the State of Illinois began to sense that the SWB control arrangements were inadequate. For a presentation of the noted areas of dissatisfaction and detail of the subsequent drafting and enactment of the Environmental Protection Act of 1970, see Appendix II.

The Environmental Protection Act of 1970

The Environmental Protection Act of 1970 was passed in June of 1970 and implemented effective July 1, 1970. The Act created a tripartite organizational structure. The three tiers consist of the Environmental Protection Agency (EPA), the Pollution Control Board (PCB), and the Illinois Institute for Environmental Quality (IEQ), authorized under Sections 4, 5, and 6 of the Act respectively.[48]

The first of the three administrative segments mentioned above is the Environmental Protection Agency. The EPA's internal organizational

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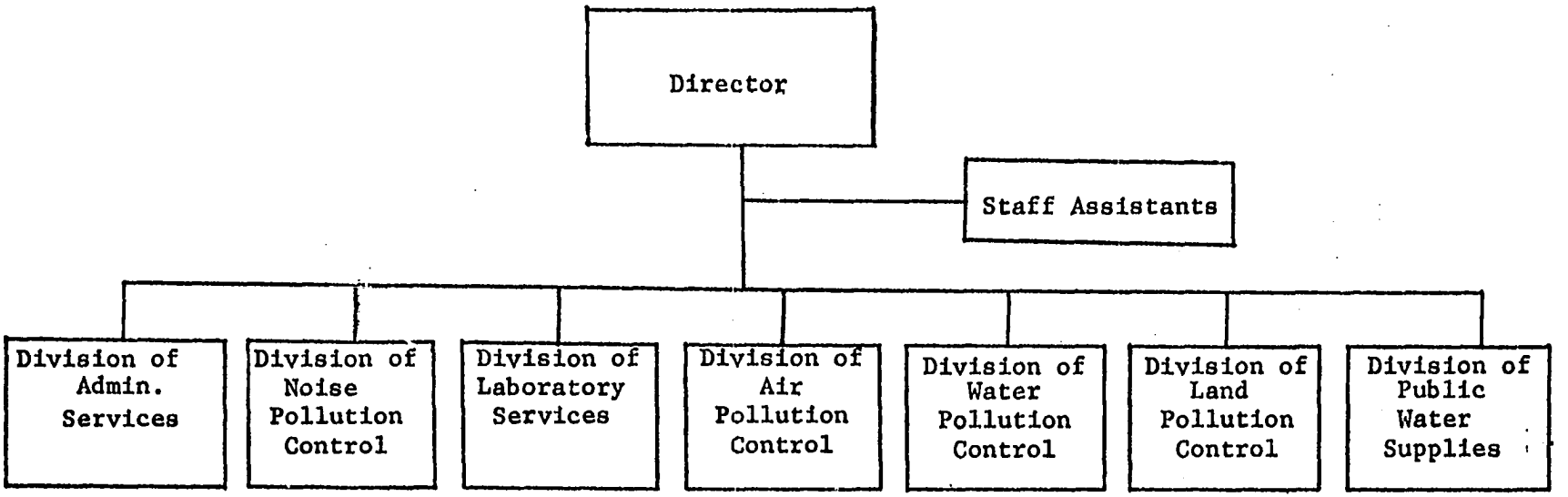
47 Based on a personal interview with Mr. K.C. Klassen, one time Technical Secretary of the Sanitary Water Board and first Director of the EPA in Springfield, Illinois.

48 The Environmental Protection Act of 1970 is presented in Appendix I.

FIGURE 2

ORGANIZATION CHART OF THE ENVIRONMENTAL PROTECTION AGENCY OF THE STATE OF ILLINOIS, JUNE 30, 1972



Source: Taken from the records of the Personnel Section of the Environmental Protection Agency, Springfield, Illinois.

structure as of June 30, 1972 is presented in Figure 2 below. Two basically different functions are recognized in the organization's network of divisions--service and control. For example, the Division of Administrative Services is responsible for hiring personnel for all other divisions, maintaining financial records for all divisions, and disseminating public information for the entire agency. One of the EPA's four control divisions is the Division of Water Pollution Control. The Division is authorized to:

> ...restore, maintain, and enhance the purity of the waters of the State in order to protect health, welfare, property, and the quality of life, and to assure that no contaminants are discharged into the waters without being given the degree of treatment or control necessary to prevent pollution.[49]

The Division was initially staffed by the personnel of the old Bureau of Stream Pollution. Detail on the number of personnel and duties performed by them is presented in subsequent chapters of this study. Charges against violators of the Act are prepared by the Division's legal staff in conjunction with the State Attorney General's Office. The charges are presented before and ruled on by the Pollution Control Board.

The Pollution Control Board consists of five board members and a staff of clerical and legal assistants. The five board members are appointed by the Governor with the consent of the Senate. The Board's general operations include holding at least one meeting each month. The meetings are to develop such things as pollution standards and

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[49] Illinois, Statutes (1970), Sect. 1, § 11, 882.

Board operating rules and regulations. The primary function of the Board is to "...determine, define, and implement the environmental control standards applicable to the State of Illinois and adopt (further) rules and regulations..." as they are consistent with the Act.[50] One subtlety of the enforcement arrangements not readily seen in the overall structure, however, is the presence of the State Attorney General's Office.[51] The ramifications of this as they are related to the Division are discussed in more detail in Chapter V. For the purpose of the present discussion, the Attorney General's presence need only be noted.

The Institute of Environmental Quality is the third tier created by the Act. Unlike the above mentioned organizations, the IEQ is not directly involved in water pollution control. The general functions of the Institute center around applied research and educational curriculum development. The applied research in some instances is preformed to aid the staffs of the EPA and the PCB. For example, the Institute aids in research for developing water quality standards in Illinois. The Institute is, however, only peripherally involved in the functions of abatement and control of water pollution. Because of this lack of direct involvment in water pollution control, the IEQ is not considered in the present study.

In summary, the initial reaction of the State of Illinois to the

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[50] Ibid., § 5, Art. b, 879.

[51] Ibid., §§ 42 - §43, 893.

Federal Water Quality Act of 1965 was to: 1) redefine the authority over water pollution of the Department of Mines and Minerals and the sanitary districts over 1,000,000 population and 2) pass water quality standards and develop implementation plans for the new standards. The next major change in pollution control came with the passage of the Environmental Protection Act of 1970. This entailed a total reorganization of the state's water pollution control arrangements. The 1970 Act developed a more centralized authority in dealing with pollution control than was present with the previous (SWB) arrangements. The agencies created by the Act to direct pollution abatement and control efforts were the Institute for Environmental Quality. The EPA and the PCB are the two arms directly involved in pollution control efforts for the state.

CHAPTER III

ILLINOIS' MONETARY COMMITMENT TO WATER POLLUTION CONTROL

As noted in Chapter I, there are four general aspects to water pollution control: legislative justification, financial commitment, manpower commitment, and legal enforcement. The previous chapter traced the history and development of the legislative justification. This Chapter examines the state's financial expenditures for water pollution control. The time period covered is from F.Y. 1960 through F.Y. 1972. This gives enough of a trend in spending to note any reaction by the state to the Federal Water Quality Act of 1965 and to the Environmental Protection Act of 1970. The specific rates of change in state spending on water pollution control should not be taken as absolute, however. A portion of the increases can be attributed to increased unit costs of personnel services, equipment and facilities over the years covered in the study. Since there are no adequate measures of inflationary pressures for state level spending, the dollar amounts presented herein include price increases where and when they occurred. Public sector funds generally come from three sources--appropriations, bond sales, and intergovernmental transfers. Private sector funds generally come from contributions by conservation and environmentally oriented groups and expenditures by large corporations and individuals. This report deals

primarily with financial commitments by the government of the State of Illinois. Other sources mentioned above are included only when they effect the amount of funds to be spent by the State of Illinois.

The financial commitment of the state can be broken down into direct and indirect expenditures. Direct expenditures are those which are made directly through some state agency. In compiling direct expenditures for various state agencies, the problem of joint costs is encountered. The joint cost problem is the reason why many of the direct expenditure figures in this study are estimated. In economic theory joint costs occur when the production of one product and/or service automatically entails the production of another product or service. The specific cost of each product or service becomes indeterminant. Examples of joint costs regarding water pollution control are found in several instances. Due to the infrequency of pollution episodes, it is uneconomical for some state departments to have full-time staff members working solely on pollution surveillance. Each of the departments discussed in Chapter II have field personnel performing various functions for their specific department. In most cases, locating polluters and aiding in investigations of pollution episodes is simply one of the staff member's duties. The department's direct expenditures on water pollution control, then, must be estimated. In some instances, these expenditure estimates can be made by assuming that a fixed porportion of a given agency's expenditures are spent on pollution control. For example, if it is known that two-thirds of a given agency's personnel time and materials are committed to pollution control, the direct costs can be allocated annually by

using a multiplier of two-thirds. If, however, the porportion of time spent is variable, an alternative means of expenditure estimation must be used. Where an agency's personnel deal with pollution problems, only as they occur, and the occurrences are irregular, the estimates must include monies expended only for those specific instances. Dollar expenditures specifically for water pollution control, used in this chapter, are estimations based on data provided by the professional staffs of the agencies involved.

Indirect expenditures are those which are not made as direct cash outlays through state agencies. An example of an indirect expenditure by the State of Illinois is the tax credit allowed private concerns for expenditures encountered in purchasing anti-pollution devices.

Direct Expenditures

Prior to 1970, direct expenditures for water pollution control came primarily from the departments that comprised the Sanitary Water Board (SWB). Since the passage of the Environmental Protection Act of 1970, the majority of the direct expenditures have come from the agencies created by the Act. There are still, however, some direct expenditures from other state departments.

Department of Agriculture

Historically there has been no direct allocation of funds by the Department of Agriculture to water pollution control. Water Pollution problems of the department are mainly those concerning feedlot runoff, pesticide, and herbicide or fertilizer application.[1] With regard to feed-

[1]Based on a personal interview with Mr. Joseph Berta of the Division of Soil and Water Conservation, Illinois Department of Agriculture on April 12, 1973.

lots, there are only 60 in Illinois with livestock counts of 1,000 head or more.[2] According to Mr. Joseph Berta, Director of the Division of Soil and Water Conservation, 60 feedlots are not enough to warrant much attention concerning pollution control. Currently, there are no regulations governing the application of plant neutrients or fertilizers. There are some licensing requirements for the use of herbidices and insecticides. The licenses are granted by the Department of Agriculture's Division of Plant and Industry. The amount of time devoted to this licensing function, however, is very small. All in all, the Department of Agriculture has not devoted any significant amount of time to the specific concerns of water pollution. Complaints on agriculturally caused pollution occurrances are directed to the Environmental Protection Agency's Division of Water Pollution Control. Prior to July 1, 1970, complaints were directed to the Bureau of Stream Pollution of the Department of Public Health or the Sanitary Water Board. Because of this lack of direct involvement, the Department of Agriculture will not be discussed further in this study.

Department of Conservation

As indicated in Chapter II, the Department of Conservation's role in water pollution abatement and control is to investigate fish kills caused by polluted waterways. Conservation field officers and biologists from the Department's Division of Fisheries aid in investigating fish kills. Because of this involvement, some direct expenditures from pollution con-

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[2]The Department of Agriculture does not regulate feedlots that have less than 1,000 head of livestock.

trol are incurred by the Department. However, these Fisheries Division personnel perform many tasks other than fish kill investigations. Furthermore, the Division does not maintain records on the specific amounts of time involved by field personnel and biologists in fish kill investigations. Because of the joint cost problem, the Division's total financial commitment to water pollution activities is an estimation.[3] The estimates are based on the average number of days involved per employee in fish investigations. This is converted into dollars by using the average salaries of the personnel involved. An additional dollar estimate made by Mr. Harth is included for utilization of equipment and facilities. The estimated expenditures by the Department of Conservation are presented in Table 1 below.

All expenditures on fish kill investigations by the State Department of Conservation are taken directly from the Department's budget appropriations. Some states receive federal assistance in financing fish kill investigations by applying for such funds under the Dingle Johnson Act of 1950.[4] This Act provides "...that the United States shall aid the states in fish restoration and management projects, and for other purposes."[5]

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[3] Mr. William Harth, Director of the Division of Fisheries, was helpful in estimating the money spent by the Department of Conservation.

[4] U.S. Congress, House, Dingle Johnson Act of 1950, Pub. L. 81-681, 81st Cong., 2nd Sess., H.R. 6533, p. 430.

[5] Ibid.

Fish kill investigation funds can be obtained under §77 of this Act. Mr. Harth indicated that Illinois uses Dingle Johnson funds for conservation purposes but not to recover the cost of investigating fish kills.[6]

It should be noted that the expenditures presented in Table 1 do not reflect the total cost to the State of Illinois for the pollution of its streams and lakes. The total cost must also include the money expenditures necessary to return polluted areas back to their original condition. The figures in Table 1 reflect only the costs to the state for manpower and equipment utilization in investigating fish kills caused by pollution.

Department of Public Health and the SWB

As noted in Chapter II, prior to the passage of the Environmental Protection Act of 1970, the Illinois Department of Public Health was more involved in pollution abatement and control than any other state agency. The greatest expenditures were made by the Department's Bureau of Stream Pollution. Small expenditures were also made by the Department's Division of Laboratories. The Division of Laboratories tested water samples gathered by Bureau personnel under the Bureau's water pollution surveillance program. The expenditures for pollution control by the Department for fiscal years 1960 through 1970 are presented in Table 2 below.[7] The Bureau of Stream Pollution expenditures included the salaries of the SWB

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[6] Based on a personal interview with Mr. William Harth, Director of the Division of Fisheries, in Springfield, Illinois on April 5, 1973.

[7] Expenditure records for the Department have passed their required record retention expiration date and have been destroyed. For this reason, appropriation figures are used in lieu of actual expenditures.

TABLE 1

EXPENDITURES FOR WATER POLLUTION CONTROL BY THE ILLINOIS DEPARTMENT OF CONSERVATION, BY FISCAL YEAR, 1960-1972

Fiscal Year	Expenditures
1960	$ 10,400
1961	18,400
1962	11,200
1963	29,600
1964	16,000
1965	15,200
1966	10,400
1967	8,800
1968	8,800
1969	10,400
1970	6,400
1971	14,400
1972	12,000

Source: Generated from data compiled from the files of the Division of Fisheries, Illinois Department of Conservation.

Technical Secretary (the Chief Sanitary Engineer of the Department of Public Health) and his personal staff. It is impossible to determine dollar expenditures spent specifically on water pollution control. The Technical Secretary's duties as head of the Division of Sanitary Engineering (Chief Sanitary Engineer) and those of his staff were so closely tied to his duties as Director of the Bureau of Stream Pollution that they could not be separated. Furthermore, the activities of both jobs involved water pollution control.[8]

From F.Y. 1960 through F.Y. 1970 the Department's contribution to water pollution control increased from 2.0% of its total appropriations to 2.7%. This trend was interrupted, however, in 1969 with 4.1% of the Department's budget going for water pollution control. The unusually large expenditures in 1969 were due to equipment purchases. New monitoring devices were purchased by the SWB in order to comply with new water quality standards set in response to the 1965 Federal Act. The equipment was purchased to improve the surveillance and performance measurement duties of the Bureau. Once this large expenditure was absorbed, the Bureau's portion of the Department's budget fell to 2.7%.

Considering the state's expenditures by source of funds--federal versus state appropriations--the impact of the 1965 Federal Act is readily apparent. (See Table 3.) Increases in the state's contribution to water pollution control expenditures within the Department were relatively modest between 1960 and 1965. Expenditures increased only $48,403 over

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[8]Based on a personal interview with Mr. Clarence Klassen, one-time Chief Sanitary Engineer for the SWB, in Springfield, Illinois on November 15, 1972.

TABLE 2

FUNDS APPROPRIATED FOR THE ILLINOIS DEPARTMENT OF PUBLIC HEALTH AND THE BUREAU OF STREAM POLLUTION, BY FISCAL YEAR, 1960-1970

Fiscal Year	Department of Public Health (1)	Bureau of Stream Pollution (2)	(2) ÷ (1)
1960	$15,309,775	$ 307,618	2.0 %
1961	15,309,775	307,618	2.0
1962	17,377,734	354,994	2.0
1963	17,377,734	354,994	2.0
1964	20,552,974	402,586	2.0
1965	20,552,974	402,586	2.0
1966	29,741,957	538,946	1.8
1967	29,741,957	538,946	1.8
1968	38,962,500	1,051,795	2.7
1969	39,877,500	1,636,795	4.1
1970	43,319,600	1,148,898	2.7

Source: Figures for the Department of Public Health are obtained from the Budget of the State of Illinois, surveyed for Biennial Sessions 1960-1961 through 1967-1969, and F.Y. 1970. Bureau figures are based on a letter from Ms. Doris Smith, Department of Public Health, Bureau of Environmental Health, dated June 21, 1973.

that period. After F.Y. 1965, however, the state's contribution began to show fairly rapid increases until the 1969 peak. As noted earlier, the purchase of monitoring equipment precipitated an almost two fold increase from 1968 to 1969. The equipment was purchased for $585,000. This purchase alone exceeded the Department's total appropriations for water pollution control for any single year prior to 1968. Federal contributions to the Department's expenditures increased steadily from 1960 through 1970. Like the state's contributions, Federal expenditures showed significant annual gains after the 1965 Federal Act went into effect.

In summary, the Department of Public Health's financial commitments to pollution control increased significantly from 1960 to 1970. These increased financial commitments were due in large part to the passage of the Federal Water Quality Act of 1965.

Department of Mines and Minerals

The activities of the Department of Mines and Minerals in the area of water pollution control are generally exempted from EPA-PCB authority. This exemption is authorized under Section 45(a) of the Environmental Protection Act of 1970. Even though exempted from EPA authority, this should not imply that the Department of Mines and Minerals has no concern or involvement in water pollution problems.

The primary function of the Department in dealing with water pollution is to investigate cases of reported water pollution incidents resulting from mineral extracting operations. As is the case with the Department of Conservation, expenditures on mine pollution incidents represent a

TABLE 3

FUNDS APPROPRIATED FOR WATER POLLUTION CONTROL BY THE ILLINOIS DEPARTMENT OF PUBLIC HEALTH, BUREAU OF STREAM POLLUTION, BY MAJOR SOURCE, BY FISCAL YEAR, 1960-1970

Fiscal Year	State Contribution	Federal Contribution	Total[a]
1960	$ 196,218	$ 111,400	$ 307,618
1961	196,218	111,400	307,618
1962	226,969	128,025	354,994
1963	226,969	128,025	354,994
1964	244,621	157,965	402,586
1965	244,621	157,965	402,586
1966	336,346	202,600	538,946
1967	336,346	202,600	538,946
1968	644,373	407,422	1,051,795
1969	1,229,373	407,422	1,636,795
1970	721,998	426,900	1,148,898

[a] For the years 1960 through 1967, the figures are biennial appropriations and have been divided between the fiscal years on a 50 - 50 basis.

Source: Based on a letter from Doris Smith of the Illinois Department of Public Health, Bureau of Environmental Health dated June 21, 1973.

joint cost to the Department of Mines and Minerals. The funds expended by the Department are channelled through the Division of Oil and Gas Conservation. The yearly expenditures of the Department from 1960 to 1972 are presented in Table 4 below. As can be seen, the Department's activities have increased rather steadily from $26,208 in 1960 to $331,040 in 1972. Also, expenditures on water pollution control activities as a percent of total Department expenditures has been increasing steadily. This trend reflects a growing consciousness of the close relationship between mining and water pollution.

The Environmental Protection Agency

Since mid-1970 the largest single source of direct expenditures for water pollution control has come from the Environmental Protection Agency (EPA). Most expenditures for water pollution are made through its Division of Water Pollution Control. As indicated in Chapter II, the Division of Water Pollution Control is one of seven such divisions. The Division of Water Pollution Control itself is further divided into nine sections. The organizational structure of the Division at the end of F.Y. 1972 is presented in Figure 3 below.

For the purpose of this discussion the Division's expenditures on water pollution control are divided into two areas. The first area consists of expenditures made by the state on general water pollution control activities such as enforcement, services, and general surveillance. The second area covers grant-in-aid expenditures for the construction of sewage treatment facilities.

TABLE 4

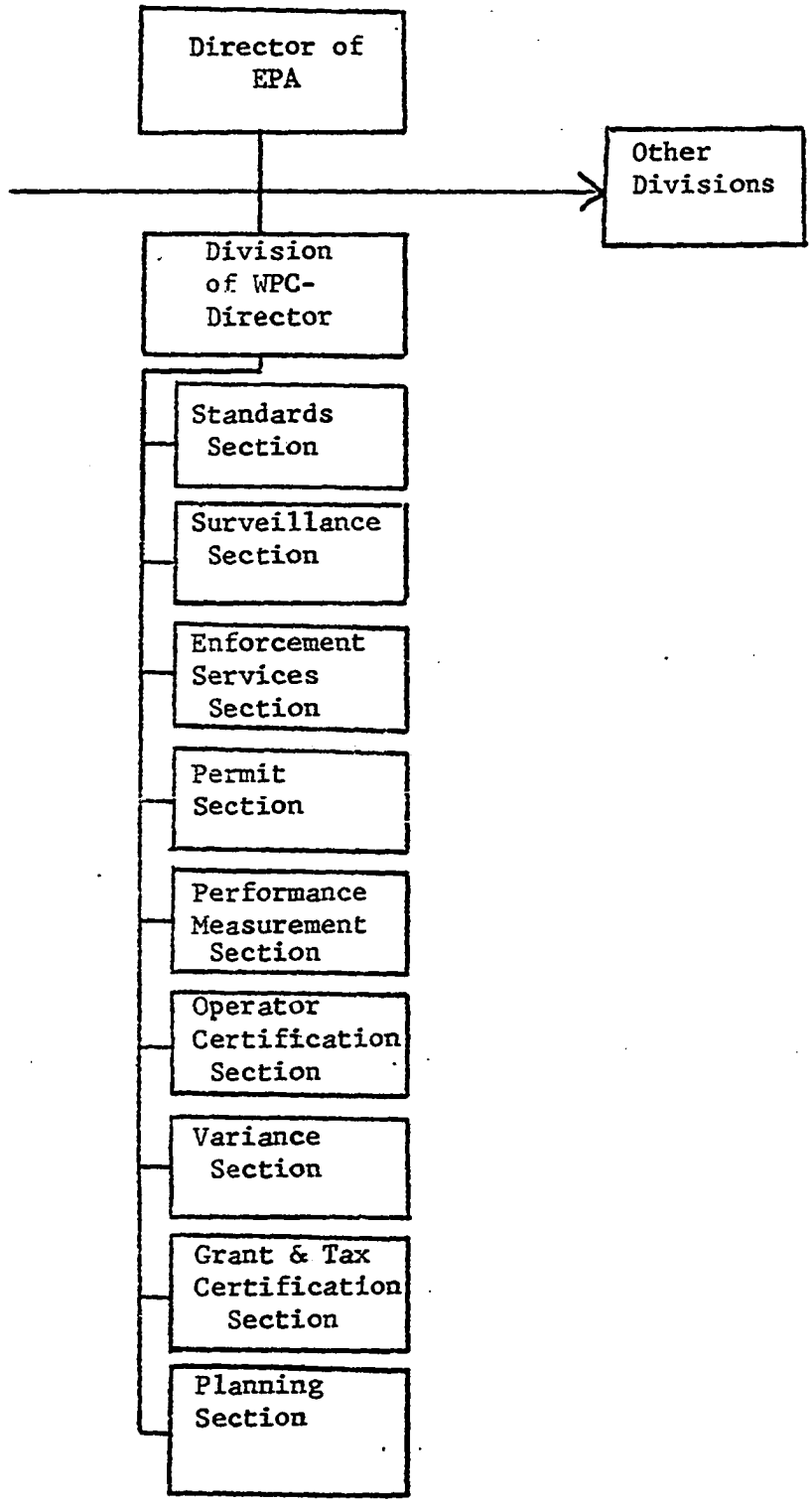
EXPENDITURES BY THE ILLINOIS DEPARTMENT OF MINES AND MINERALS FOR WATER POLLUTION INVESTIGATIONS, BY FISCAL YEAR, 1960-1972

Fiscal Year	Total Expenditures of the Department (1)	Expenditures on Water Pollution Investigations (2)	(2)÷(1)
1960	$ 642,119	$ 26,208	.04
1961	642,119	39,684	.06
1962	698,123	44,610	.06
1963	698,123	66,001	.09
1964	725,164	84,875	.12
1965	725,164	79,856	.11
1966	833,475	87,136	.10
1967	833,476	104,640	.12
1968	1,035,065	165,320	.16
1969	1,050,630	201,040	.19
1970	1,110,561	303,550	.27
1971	1,176,000	291,650	.25
1972	1,514,800	331,040	.22

Source: Figures for the Department of Mines and Minerals were obtained from the Budget of the State of Illinois, surveyed for Biennial Sessions from 1960-1961 through 1967-1969, and for F.Y. 1970, F.Y. 1971, and F.Y. 1972. Water pollution investigation figures were obtained from the files of Mr. George Lane, Supervisor, Oil and Gas Division, Department of Mines and Minerals, May 14, 1973.

FIGURE 3

ORGANIZATION CHART OF THE ILLINOIS EPA, DIVISION OF WATER POLLUTION CONTROL AS OF FISCAL YEAR 1972



Source: Compiled from data obtained from the Illinois EPA, Office of Public Information.

Within the first area, there are two sources of funds for the general activities carried out by the Division of Water Pollution Control. The primary source is the state general revenue fund. The second source is the federal government. Expenditures by the Division of Water Pollution Control for F.Y. 1971 and F.Y. 1972 are presented in Table 5 below. Of the total expenditures by the Division of Water Pollution Control in both

TABLE 5

EXPENDITURES BY THE DIVISION OF WATER POLLUTION CONTROL, BY FISCAL YEAR, 1971-1972

Fiscal Year	Illinois General Fund	Federal Government	Total
1971	$ 1,757,248	$ 433,772	$ 2,191,020
1972	1,999,018	532,556	2,531,574

Source: Compiled from the records of Mr. Gordon Brenne, budget analyst for the EPA, Springfield, Illinois.

F.Y. 1971 and F.Y. 1972, 80% came from the state's general revenue fund and the remaining 20% came from the federal government. From 1971 to 1972, however, there was an increase of 15.5% in the Division's total expenditures. Even with this substantial increase, the expenditures of the water pollution division relative to the total EPA expenditures decreased from roughly 35% in 1971 to about 30% in 1972.[9]

A breakdown of expenditures for the nine sections within the Division of Water Pollution Control is not possible at this time. For F.Y. 1971

[9]These percent figures exclude expenditures based on the administration of the Anti-Pollution Bond Act of 1970.

and F.Y. 1972 the budget was prepared on a line item basis for the entire Division.[10] The line item budgeting procedure entails the grouping of a given agency's budgetary needs in terms of specific items, irrespective of detailed needs for specific programs or sections. These line items include such things as personnel services, travel expenditures, office supplies, and contractual services for consultants. Budget requirements for the EPA are compiled for each of the agency's seven divisions. Within each division, however, no attempt is made to itemize dollar expenditures apportioned to specific sections. For example, within the Division of Water Pollution Control, there is no budget breakdown made as regards the expenditures of the Enforcement Services Section or the Surveillance Section. This lack of budget information concerning the activities of the various sections within the Division makes it difficult to analyze the dollar effectiveness of the various programs undertaken by the Division. The EPA should work toward the development of a program budget in lieu of the current line item budget. A program budget is one in which the expenditure needs are determined by each program and section involved in a given effort such as water pollution control. For example, as regards the Division of Water Pollution Control, the implementation of some sort of program budget would allow the fiscal analysts of the EPA to determine how much money is being spent on surveillance functions, performance measurement, and planning for regionalization. The general workings of a program budget are centered around a set of defined goals

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[10] Based on a personal interview with Mr. Gordon Brenne, budget analyst for the Environmental Protection Agency, on April 16, 1973.

or objectives for a given agency and each of its sections. Once these objectives are set, the needs for such items as manpower and consulting services are determined in line with the stated objectives.

Another type of expenditure by the Division of Water Pollution Control is for the administration of state grants for sewage treatment plant construction under the Anti-Pollution Bond Act of 1970.[11] This Bond Act, passed in November of 1970, authorizes the sale of bonds by the state. The proceeds from the bond sales allow the state to participate in the federal grant-in-aid program, sewage treatment plants are financed by matching funds. The matching formula is 50-25-25, or 50% federal, 25% state, and 25% from the municipality or sanitary district. The first sale of bonds under the Illinois Act occurred in January of 1972. The first funds were not released, however, until August of 1972. There were no expenditures under the Act in F.Y. 1971. Presented in Table 6 below are the expenditures for F.Y. 1972 under the Act.

The funds released by the state for sewage treatment plant construction are cleared through the Illinois Office of Planning and Analysis, as well as the EPA. The personnel of the Office of Planning and Analysis review the grant application to check for overlap with other grant applications. This function is to assure the state and federal government that there is no duplication of funds going to a given local government or state agency. The Grant and Tax Certification Section of the WPC Division is the EPA's

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[11] Illinois, Statutes (1970), 950.

[12] William Blazer, "EPA-Administration of Anti-Pollution Bonds", Illinois Municipal Review, July, 1971, p. 21.

TABLE 6

FUNDS RELEASED BY THE EPA UNDER THE ANTI-POLLUTION BOND ACT OF 1970 BY FISCAL YEAR, 1971-1972

Fiscal Year	Expenditures
1971	-0-
1972	$ 80,386,751

Source: Compiled from the files of the Grant and Tax Certification Section of the Division of Water Pollution Control of the EPA in Springfield, Illinois.

representative in the process. The personnel of the Grant and Tax Certification Section review the grant application construction plan. This check is to see if the proposed construction is worthy of a fund commitment and meets the state's standards for treatment plant construction. This clearing house procedure is required under the Federal government's A-95 Program. The A-95 Program was started in 1969 by a Presidential executive order originating with the Federal Office of Management and Budget. The Program's stated purpose is to furnish "...guidance to federal agencies for added cooperation with state and local governments in the evaluation, review, and coordination of federal assistance programs and projects.[13]

In summary, total direct expenditures by the EPA for water pollution control came from performing services such as surveillance and from administering the release of grant-in-aid funds for treatment plant con-

[13]U.S. Office of Management and Budget, "Evaluation, review, and coordination of Federal and federally assisted programs and projects", Washington, D.C., February 9, 1971, p. 1.

struction. The total expenditures for the EPA for F.Y. 1971 and 1972 are presented in Table 7 below.

TABLE 7

TOTAL EXPENDITURES OF THE EPA FOR WATER POLLUTION CONTROL BY CATEGORY, BY FISCAL YEAR, 1971-1972

Fiscal Year	Water Pollution Control Division	Anti-Pollution Bond Act	Total
1971	$ 2,191,020	$ -0-	$ 2,191,020
1972	2,531,574	80,386,751	82,918,325

Source: Compiled from Table 5 and Table 6.

Pollution Control Board

The Pollution Control Board performs two functions related to water pollution control: 1) to hold hearings and enact water quality standards and 2) to hold hearings and make judgements on violations of the 1970 Environmental Protection Act. Since the Board is involved with many issues other than water pollution, joint costs must again be estimated. Expenditures by the Board in carrying out functions related to water pollution are presented in Table 8 below.

The 103% increase in expenditures between F.Y. 1971 and F.Y. 1972 is explained by the sharp increase in the number of hearings dealing with water pollution issues. Through F.Y. 1971 the PCB used as criteria for its enforcement needs, the water quality standards of the SWB. (The SWB standards are discussed in Chapter II.) Expenditures for water pollution control for F.Y. 1971 were primarily for holding enforcement hearings. These hearings were based on complaints of violations of the Act. But,

during F.Y. 1972 new water quality standards were passed. To generate these new standards hearings had to be held. These standards hearings, in addition to enforcement hearings, caused the number of hearings in

TABLE 8

EXPENDITURES RELATED TO WATER POLLUTION CONTROL BY THE PCB, BY FISCAL YEAR, 1971-1972

Fiscal Year	Total PCB (1) Expenditures	WPC (2) Expenditures	(2) ÷ (1)
1971	$ 369,900	$ 8,770	2.6%
1972	755,600	17,812	2.3

Source: Generated from data obtained during a telephone interview with Ms Sandra Wiley, budget analyst for the PCB, on April 23, 1973.

F.Y. 1972 to increase over that of F.Y. 1971. PCB expenditures rose sharply. Near the end of F.Y. 1972 the Pollution Control Board ran out of funds and had to have an emergency appropriation by the legislature to complete the year.[14] According to a PCB legal administrative assistant, Mr. Marvin Medintz, this latter financial crisis was due primarily to an underestimation, at the beginning of the year, of funds required for the recording of hearings. The expense of hiring personnel to record the hearings was much greater than expected, when the PCB budget for the year was prepared. It might be noted that as a percent of total Board expenditures, water pollution control expenditures remained approximately the same in F.Y. 1971 and 1972.

[14]Based on a personal interview with Mr. Marvin Medinitz, Legal Administrative Assistant for the PCB, in Springfield on May 15, 1973.

Total Direct Expenditures

Total direct expenditures in Illinois on water pollution control are summarized in Table 9. As indicated earlier, the Department of Public Health functioning as the service arm of the SWB was the primary source of expenditures until the end of F.Y. 1970. Over the 10 year period, enforcement activities by the Department of Mines and Minerals placed their expenditures unquestionably in second place over the Department of Conservation.

Expenditures by the state increased from $344,226 in 1960 to $83,279,177 ($2,892,426 without Anti-Pollution Bond Act funds) in 1972. The sharp increase after 1967 is the result of several factors. First is the two fold increase in Federal funding to the State of Illinois. Additional federal funds were made available after the state demonstrated compliance with the Federal Water Quality Act of 1965. The increase in federal funding can be seen in Table 10 below. The purchase of the new monitoring equipment with monies from the state's general fund in 1968 and 1969 also acted as a stimulus to total expenditures. Another factor leading to increases was the passage of the Environmental Protection Act of 1970. (The Act generated additional state appropriations to meet the increasing scope of and intensifying concern for water pollution control.) The largest addition to the expenditures came with the passage of the Anti-Pollution Bond Act of 1970. The state expended $80.3 million dollars in anticipation of federal matching funds for the construction of sewage treatment facilities.

TABLE 9
TOTAL DIRECT EXPENDITURES ON WATER POLLUTION CONTROL
BY THE STATE OF ILLINOIS, BY
FISCAL YEAR, 1960-1972

Fiscal Year	Department of Conservation	Department of Public Health and SWB [a]	Department of Mines and Minerals	Environmental Protection Agency	Pollution Control Board	Total [b]
1960	$10,400	$ 307,618	$ 26,208	$ -0-	$ -0-	$ 344,226
1961	18,400	307,618	39,684	-0-	-0-	365,702
1962	11,200	354,994	44,610	-0-	-0-	410,804
1963	29,600	354,994	66,001	-0-	-0-	450,595
1964	16,000	402,586	84,875	-0-	-0-	503,461
1965	15,200	402,586	79,856	-0-	-0-	497,642
1966	10,400	538,946	87,136	-0-	-0-	636,482
1967	8,800	538,946	104,640	-0-	-0-	652,386
1968	8,800	1,051,795	165,320	-0-	-0-	1,225,915
1969	10,400	1,636,795	201,040	-0-	-0-	1,848,235
1970	6,400	1,148,898	303,550	-0-	-0-	1,658,848
1971	14,400	-0-	291,650	2,191,020	8,770	2,505,840
1972	12,000	-0-	331,040	2,531,574 (82,918,325)	17,812	2,892,426 (83,279,177)

[a]Appropriation data is used in lieu of expenditure figures since the latter are unavailable.
[b]1972 figures are presented both with and without expenditures under the Anti-Pollution Bond Act of 1970.
Source: Compiled from Tables 1,2,4,7, and 8.

TABLE 10

EXPENDITURES FOR WATER POLLUTION CONTROL BY THE STATE OF ILLINOIS, BY MAJOR SOURCE, BY FISCAL YEAR, 1960-1972

Fiscal Year	Federal Grants	State Expenditures	Total
1960	$ 111,400	$ 232,826	$ 344,226
1961	111,400	254,302	365,702
1962	128,025	282,779	410,804
1963	128,025	338,570	450,595
1964	157,965	345,496	503,461
1965	157,965	339,677	497,642
1966	202,600	433,882	636,482
1967	202,600	449,786	652,386
1968	407,422	818,493	1,225,915
1969	407,422	840,813	1,848,235
1970	426,900	1,231,948	1,658,848
1971	433,772	2,072,068	2,505,840
1972	532,556	(82,746,621)[a]	(83,279,177)[a]

[a] Expenditures including the Anti-Pollution Bond Act of 1970 grants.

Source: Generated from Tables 1, 3, 4, 5, 7, and 8.

Indirect Expenditures

As noted earlier, a portion of the expenditures made by the State of Illinois in combating water pollution are indirect. The main source of indirect expenditures in Illinois is an allowable tax exemption from the Retailer's Occupation Tax (sales tax). These expenditures are generally measured by the tax revenues foregone in allowing tax credits for the installation of water pollution abatement equipment by private interests. The Illinois Retailer's Occupation Tax is levied on the use or sale of all tangible personal property. As regards purchases of pollution control equipment, however, the state revenue code makes an exception.

> "Pollution control facilities" means any system, method, construction, device or appliance appurtenant thereto sold or used or intended for the primary purpose of eliminating, preventing, or reducing air and water pollution...
> . . . . . .
> The purchase, employment and transfer of such tangible personal property as pollution control facilities is not a purchase, use or sale of tangible personal property.[15]

If it is found that the purchaser of a piece of equipment does not act in good faith--he indicates upon purchasing the equipment that the device is for the control of pollutants and in fact he does not use the equipment for such--the purchaser is liable to pay the tax. The judgement to exempt or not exempt the purchase is made at the point of sale. The state does not require any written statements or reports concerning the transaction to be filed. Because of this lack of filed information, there is no way, at present, to determine the dollar amount

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[15] Illinois, Revised Statutes, Annotated, Ch. 102, §440a (1971), 136.

of exemptions made under the revenue code.[16]

Another source of indirect expenditure is allowed by the State of Illinois but accrues to local governments. This source is related to property taxes. Senate Bill 958 enacted in 1969 allows for private interests to receive a certain amount of exemption on property taxes when pollution control devices are purchased and installed. More than an exemption from the property tax laws, this is consedered "special treatment" under the law.[17] Under the Illinois Revenue Act, all real and personal property is to be assessed at 50% of its market value. S.B. 958 directs the Illinois Department of Local Government Affairs (LGA) to assess pollution control devices at their fair cash value based on the economic productivity of the equipment. Inasmuch as the "economic productivity" of pollution control devices for a given plant operation as measured by profit and loss is negligible, LGA has chosen to use the equipment scrap value as the basis for which to levy taxes.[18] The scrap

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[16]Based on a telephone interview with Mr. William Scovill of the Illinois Department of Revenue, on April 11, 1973.

[17]Based on a personal interview with Mr. Larry Bullock of the Illinois Department of Local Government Affairs, in Springfield on April 12, 1973.

[18]The measurement of the pollution control equipment's "economic productivity" leads to a problem in dealing with Pareto-relevant positive externalities. These externalities are, in the current discussion, created as a benefit to the consumers in the form of clean water. In return, however, the producer is not compensated for this benefit. He has no way of reflecting such in his profit and loss statement. The state is, however, allowing the producer to exempt the equipment from the firm's property tax bill. This exemption, in essence, acts to compensate the firm for the social benefit. Due to inadequate measuring devices, however, it is impossible to determine whether the amount of tax exemption affords the producer an amount of money equal to, less than, or greater than the amount forthcoming of the externalities were accurately measured and priced.

value of the equipment is estimated by LGA to be 1.5% of the ordinary assessed value. A minimum scrap value of $1,000 has been set by LGA. If the calculated scrap value is less than $1,000, taxes are still levied against the base of $1,000 scrap value.

The procedure for obtaining this special treatment begins with the firm filing a request for "equipment certification" from the EPA. The EPA Division of Water Pollution Control reviews the plans for installation and use to certify the use of the equipment as valid or invalid according to existing pollution laws. This EPA certification is then sent to LGA for processing. The Department of Local Government Affairs processes the request and certification. Upon approval from LGA the county clerk of the respective taxing district is notified and the reassessment of the equipment is made accordingly. Inasmuch as the funds are foregone at the local level, further mention of this exemption is beyond the scope of this study.

Total Water Pollution Control Expenditures

As noted, the absence of an adequate reporting system by the Illinois Department of Revenue for its Retailer's Occupation tax exemption makes it impossible to determine the amount of indirect expenditure made by the state on water pollution control. Because of this, total direct expenditures by the state and total expenditures are assumed to be the same for the purpose of this study. Additional light can be shed on Illinois' increased spending commitment by examining the trend in per capita water pollution control expenditures. This trend is presented in Table 11 below.

TABLE 11

ANNUAL PER CAPITA EXPENDITURES ON WATER POLLUTION CONTROL IN THE STATE OF ILLINOIS, BY FISCAL YEAR, 1960-1972

Fiscal Year	Population (thousands) (1)	Expenditures (dollars) (2)	Per Capita Expenditures (2 ÷ 1)
1960	10,081	$ 344,226	$ 0.034
1961	10,213	365,702	0.035
1962	10,313	410,804	0.039
1963	10,422	450,595	0.043
1964	10,489	503,461	0.047
1965	10,646	497,642	0.046
1966	10,722	636,482	0.059
1967	10,893	652,386	0.059
1968	10,974	1,225,915	0.122
1969	11,047	1,848,235	0.167
1970	11,109	1,658,848	0.149
1971	11,259	2,505,840	0.222
1972	11,363	2,892,426	0.254
		(83,279,177)	(7.328)

Source: Population figures are from U. S. Department of Commerce, Bureau of the Census, United States Census of Population 1960. Detailed Characteristics. Illinois, (Washington, D.C.: Government Printing Office, 1962). For 1964 to 1969, U. S. Department of Commerce, Bureau of the Census, Government Finances, (Washington, D.C.: Government Printing Office). For 1970, U.S. Department of Commerce, Bureau of the Census, United States Census of Population 1970. Detailed Characteristics. Illinois, (Washington, D.C.: Government Printing Office, 1972). Population estimates for the remaining years were estimated by using simple regression time series analysis.

Expenditures per capita by the State have increased from $0.034 in 1960 to $7.33 in 1972. This large increase is accounted for primarily through the state's contribution to federal matching fund program for the construction of sewage facilities. Excluding these funds, the 1972 figure is smaller--$0.245. The cost per individual in Illinois for water pollution control efforts is about the same as a bottled soft drink.

The expenditures of funds alone can not be used as evidence of adequate or inadequate pollution abatement efforts. The pattern and use of the funds among the various administrative, surveillance, and performance measurement needs must be considered also. The following chapter examines how these funds have been used in staffing the various agencies.

CHAPTER IV

ILLINOIS' MANPOWER COMMITMENT TO WATER POLLUTION CONTROL

Manpower allocations, as noted in Chapter I, are related in a very fundamental way to the state's financial commitments. Much of the money spent on water pollution control activities consists of the wages and salaries of personnel. Thus manpower allocation is directly dependent on appropriations. Also, the problems encountered in compiling manpower data are much the same as those encountered in compiling financial data. For example, in determining the precise amount of manpower or man hours devoted to water pollution, one encounters a situation very analagous to the joint cost problem discussed in Chapter III. Since many state agencies have been only peripherally involved in water pollution activities, they have not maintained detailed manpower records of their water pollution activities. Thus, precise manpower allocation data for each agency must be estimated. The manpower figures presented in this Chapter, then, are estimates based on the informed judgement of agency officials who head the various divisions involved in water pollution activities.

Department of Conservation

Fish kill investigations generally involve two staff personnel from the Division of Fisheries--a conservation officer and a fishery biologist. It is estimated that these two officials spend an average of four days

each, per reported fish kill.[1] Estimated manpower commitments by the Division from F.Y. 1960 through F.Y. 1972 are presented in Table 12. Man-days are converted to full-time equivalents (F.T.E.). Full-time equivalent conversions were also computed for the Department of Mines and Minerals and the Pollution Control Board. Both the Department of Public Health and the Environmental Protection Agency report manpower data in terms of full-time equivalents. The latter two agencies account for most of the manpower devoted to water pollution activities by the state. Thus, the conversion to F.T.E. figures for the other agencies is necessary for comparison purposes.

The F.T.E. figures for the Department of Conservation are calculated by first multiplying the number of fish kills investigated in a given year by the number of man-days committed per kill -- eight man-days (four man-days for the biologist and four man-days for the conservation officer). On the assumption that a man works 250 days each year, the total man-days were divided by 250. The result yields the F.T.E. (man-years) committed to fish kill investigations. This F.T.E. figure is the portion of time one full-time worker would have committed to the investigations. For example, in 1960 thirteen fish kills were investigated. The two Division personnel committed an estimated 104 man-days to these investigations. One hundred and four man-days constitute 42 percent of one man-year -- the full-time equivalent. The investigations presented in Table 12 exclude those

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[1] Based on a personal interview with Mr. William Harth, Director of the Fisheries Division, on April 5, 1973.

reports that turned out to be false alarms.[2] The data in Table 12 do not indicate an increasing or decreasing trend in the conservation department's manpower commitment to water pollution activities. This is not unreasonable since the agency is engaged solely in ex post investigatory work. In addition fish kills seem to occur on a random basis from year to year.

Illinois Department of Public Health and the SWB

The Sanitary Water Board Act of 1929 charged the Bureau of Stream Pollution with the primary responsibility for carrying out surveillance activities relating to water pollution. The Bureau's staff consisted of sanitary engineers, technical non-engineering personnel and clerical personnel. The non-engineering personnel were generally either sanitarians or sanitary inspectors. Sanitary engineers were trained professional civil engineers. Their primary function (although they performed many more) was to review plans for proposed sewage treatment facilities. The plans were reviewed to assure that state water quality standards would be met by the operating design of the proposed plant. Sanitarians were generally college educated biologists. Their duties centered around the development of water sample testing techniques and water quality standards. The Sanitary inspectors were non-degree personnel who aided the sanitary engineers and and the sanitarians in performing pollution surveillance activities.[3]

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2 Ibid. A detailed discussion of investigation procedures is presented in Chapter V.

3 A discussion of the surveillance activities of the Bureau's personnel is presented in Cahpter V.

TABLE 12

ESTIMATED MAN-DAYS AND FTE's EXPENDED INVESTIGATING POLLUTION CAUSED FISH KILLS BY THE DIVISION OF FISHERIES OF THE ILLINOIS DEPARTMENT OF CONSERVATION, BY FISCAL YEAR, 1960-1972

Fiscal Year	Man-days	FTE's[a]
1960	104	0.42
1961	184	0.74
1962	112	0.45
1963	296	1.18
1964	160	0.64
1965	152	0.61
1966	104	0.42
1967	88	0.35
1968	80	0.32
1969	104	0.42
1970	64	0.26
1971	144	0.58
1972	120	0.48

[a]Full-time equivalents (FTE's) are calculated by dividing the total number of man-days spent on fish kills by the total number of work days in a year--250. The results yield the amount of time that would have been committed to fish kill investigations by full time workers.

Source: Data on fish kills and man-day estimates generated on the basis of an interview with Mr. William Harth, Director, Division of Fisheries, Department of Conservation, in Springfield, Illinois, on April 5, 1973.

During the ten years from F.Y. 1960 to F.Y. 1970, the Bureau staff increased in size. (See Table 13 below.) Most of the increase came from the addition of non-engineering and clerical positions. The number of engineers assigned to the Bureau increased from 8 in 1960 to 15 in 1970, while the non-engineering and clerical staff increased from 8 to 22. This trend (an overall increase of 250%) reflects an increased manpower commitment by Illinois in combating water pollution. However, by 1970 the part-time SWB and its 37 man Bureau of Stream Pollution was responsible for controlling and abating pollution from sanitary sewers and industry in the fifth most populace (11.1 million persons) state in the country. In addition, Illinois is also one of the most industrialized states. From this perspective, one might question the state's true commitment.

Department of Mines and Minerals

As indicated in Chapter III, the Department of Mines and Minerals' involvement in water pollution has been centered around the investigation of pollution episodes related to mineral extractions. Investigations are generally performed by a staff consisting of 22 field inspectors. Field inspectors are generally given additional support by other department personnel in compiling and analyzing investigation findings and preparing final reports. Inspectors are assigned throughout the state on a county basis. Assignments are made in such a manner so as to equalize the number of mining operations per inspector. Because of this, one inspector may be assigned to one or two counties while another may have as many as eleven or twelve. County assignments are presented in Table 14 below. Pollution

TABLE 13

PERSONNEL EMPLOYED BY THE ILLINOIS BUREAU OF STREAM POLLUTION, BY JOB CATEGORY, BY FISCAL YEAR, 1960-1970

Fiscal Year	Sanitary Engineers	Nonengineers[a]	Clerical	Total
1960	8	4	4	16
1961	7	5	4	16
1962	9	2	4	15
1963	9	4	3	16
1964	11	4	3	18
1965	12	4	6	22
1966	15	4	8	27
1967	15	6	8	29
1968	16	10	10	36
1969	15	11	11	37
1970	15	11	11	37

[a]Includes both sanitarians and sanitary inspectors.

Source: Based on a letter from Mr. Clarence Klassen, one time Technical Secretary of the Sanitary Water Board and first Director of the Environmental Protection Agency, in Springfield, Illinois, dated August, 1973.

TABLE 14

FIELD INSPECTORS AND COUNTY ASSIGNMENTS FOR THE DIVISION OF OIL AND GAS CONSERVATION, OF THE ILLINOIS DEPARTMENT OF MINES AND MINERALS FOR FISCAL YEAR 1972

Inspectors	Counties Assigned Each Inspector
Glen Applegate	Clark, Edgar, Vermillion, Cumberland
Elwyn Betchel	Marion, Jefferson
Everett Clifton	Champaign, Coles, Douglas, Moultrie, Piatt
Marion Fritschle	Jasper
Harold Garman	Edwards
Harold Gibson	Christian, Dewitt, Logan, Macon, Sangamon
William Hisey	Gallatin, Hardin, Pope, Saline
Tom Martin	Cook, DuPage, Grundy, Kankakee, Kendall, Will, LaSalle, Ford, Iroquois, Livingston
Dominic Molinar	Bond, Madison, Monroe, St.Clair
William Newman	Greene, Jersey, Macoupin, Montgomery
Charles Pfrimmer	Adams, Brown, Calhoun, Cass, Fulton, Hancock, McDonough, Mason, Menard, Morgan, Pike, Schuyler, Scott, Tazewell, Woodford
Floyd Prince	Hamilton, Wayne
Herschel Ragen	Clinton, Perry, Randolph, Washington
Marshall Sork	Boone, DeKalb, Kane, Lake, McHenry, Winnebago
Cleo Spond	Wabash, White
Max St. Pierre	Effingham, Fayette, Shelby
John Upchurch	Clay
Everett Warner	Lawrence, Richland
Samuel Watts	Crawford
Edward Wirth	Bureau, Carroll, Henderson, Henry, Knox, JoDaviess, Lee, Marshall, Mercer, Ogle, Peoria, Putnam, Rock Island, Stark, Warren, Stephenson, Whiteside
Lenard Sturm	Inspector-at-large
Charles Rogers (Field Supervisor)	Alexander, Franklin, Jackson, Johnson Massac, Pulaski, Union, Williamson

Source: Based on a letter received from Mr. George Lane, Supervisor, Division of Oil and Gas Conservation, Illinois Department of Mines and Minerals, dated June 2, 1973. See also, Illinois Department of Mines and Minerals, Annual Report: 1972, (Springfield, Illinois: Department of Mines and Minerals, 1973) p. 85.

inspections, however, are only one of many functions field investigators perform. Data on manpower commitment by the Department were furnished in the form of man-hours expended on pollution investigations.[4] The man-hour figures were converted to full-time equivalents (F.T.E.) to make the data comparable with the other manpower figures presented in this study. Initially, the man-hours were converted to man-days by dividing the former by eight (an assumption was made that a man-day was equivalent to eight man-hours). As was the case with the Department of Conservation data, man-days were then converted to full-time equivalents by dividing each fiscal year's man-day figure by 250. For example, in F.Y. 1960, 1,094 man-days were expended by the Division's personnel in investigating pollution episodes and complaints. Although these 1.094 man-days may have involved several of the inspectors and other Department personnel, the time expended was equivalent in amount to work done by 4.37 full-time personnel--full-time equivalents.

As is indicated by the data in Table 15, the Department's manpower commitment to combating water pollution increased from 4.37 F.T.E. in F.Y. 1960 to 33.10 F.T.E. in F.Y. 1972. This represents more than a 7 fold increase in manpower commitment during the 12 year period. This relatively large commitment places the Department of Mines and Minerals second only to the Environmental Protection Agency in terms of manpower allocations in combating water pollution.

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[4]Compiled from the files of Mr. George Lane, Supervisor of the Division of Oil and Gas Conservation of the Department of Mines and Minerals.

TABLE 15

ESTIMATED MAN-DAYS AND PERSONNEL EXPENDED INVESTIGATING WATER POLLUTION COMPLAINTS BY THE ILLINOIS DEPARTMENT OF MINES AND MINERALS, BY FISCAL YEAR, 1960-1972

Fiscal Year	Man-days	FTE's[a]
1960	1,094	4.37
1961	1,661	6.64
1962	1,859	7.44
1963	2,584	10.33
1964	3,031	12.13
1965	2,852	11.41
1966	3,112	12.45
1967	3,270	13.08
1968	5,116	20.67
1969	5,026	20.10
1970	7,589	30.36
1971	7,291	29.17
1972	8,276	33.10

[a]Full-time equivalents (FTE's) are calculated by dividing the total number of man-days spent on investigations by the total number of work days in a year--250. The results yield an equivalent number of full-time workers committed to pollution investigations.

Source: Compiled from the files of Mr. George Lane, Supervisor of the Division of Oil and Gas Conservation of the Department of Mines and Minerals.

The Environmental Protection Agency

The EPA's involvement in water pollution activities, as noted earlier, is channelled through its Division of Water Pollution Control (DWPC). DWPC's original staff came primarily from the dissolved Bureau of Stream Pollution and consisted of 37 full-time employees. By the end of 1971 its staff had increased to 116 and by July of 1972 had grown to 165 full-time members. During fiscal year 1971 all seven sections within the DWPC experienced staff increases. In fiscal year 1972 two entirely new sections were created - The Enforcement Services Section and the Planning Section. General descriptions of the functions of each of the Division's sections is presented in Table 16. Breakdowns of the Division's personnel by fiscal year , job category and section are presented in Tables 17 and 18.

The Enforcement Services Section was added to the DWPC as a result of a reorganization within the EPA. During this reorganization, one of the EPA's eight divisions, the Division of Legal Services (DLS), was eliminated. The staff of DLS was distributed among the EPA's various control divisions -- air, water, land, and noise.[5] The addition of an enforcement section increased DWPC's staff by 10 in F.Y. 1972.

The new Planning Section was added in response to a need for implementing regional planning of sewage treatment facilities. The personnel of the Planning Section are concerned with the coordination of funding, plannin and developing of regional, multi-county or metropolitan area wide

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5 A detailed discussion of the events leading to this reorganization viz a viz the creation of the Enforcement Services Section in the DWPC, is presented in Chapter V.

TABLE 16

FUNCTIONAL BREAKDOWN OF THE SECTIONS OF THE DIVISION OF WATER POLLUTION CONTROL AS OF THE END OF FISCAL YEAR 1972

Section	Function
Standards	To propose, advise on, or respond to formal inquiries for standards both for effluents and water quality.
Surveillance	To conduct activities adequate to detect violations of the law, standards, or regulations, and provide evidence adequate for successful prosecution.
Enforcement	To translate specific technical indications of violations of the law, standards, and regulations into prosecutable cases. To perform necessary legal research to insure successful prosecution.
Permit	To issue permits for construction and operation of facilities.
Performance Measurement	To establish criteria and to measure the divisions performance of its purpose.
Operator Certification	To train and certify operators of sewage processing facilities.
Variance	To research and recommend action in variance requests from established standards, and to follow-up on Board Orders pursuant to variance and enforcement cases, and to monitor compliance schedules.
Grant and Tax Certification	To administer the Federal and State municipal sewage works construction grants program and to certify industrial waste treatment facilities for tax credit entitlements.
Planning	To provide for the development of water quality management planning for the waters of the State; and to insure the optimal investment of public funds in water pollution control facilities to achieve State and national water quality objectives.

Source: Compiled from data on EPA organization function and structure provided by the Division of Administrative Services, the Environmental Protection Agency, in Springfield, Illinois.

TABLE 17

PERSONNEL EMPLOYED IN THE DIVISION OF WATER POLLUTION CONTROL OF THE ILLINOIS EPA, BY JOB CATEGORY AND SECTION, AS OF THE END OF FISCAL YEAR 1971

Job Category[a]	Section		
	Standards	Variance	Surveillance
Environmental Protection Engrs.			
VI	---	---	2
V	1	1	4
IV	---	---	3
III	---	---	3
II	---	1	6
I	---	---	8
Sanitarians			
III	---	---	4
II	1	---	7
I	---	---	8
Sanitary Inspectors			
II	---	---	4
I	---	---	1
Resource Planner			
V	---	---	---
IV	---	---	---
III	---	---	---
II	---	---	---
I	---	---	---
Legal Technical Assistants			
IV	---	---	---
III	---	---	---
II	---	---	---
Accountant			
V	---	---	---
III	---	---	---
II	---	---	---
Clerical	2	1	12
Total	4	3	62

TABLE 17 -- Continued

Job Category[a]	Section		
	Permit	Facilities Certification	Operator Certification
Environmental Protection Engrs.			
VI	1	---	---
V	3	1	---
IV	4	1	1
III	4	1	---
II	6	1	---
I	1	2	---
Sanitarians			
III	---	2	---
II	---	2	---
I	---	---	---
Sanitary Inspectors			
II	1	---	---
I	---	---	---
Resource Planner			
V	---	---	---
IV	---	---	---
III	---	---	---
II	---	---	---
I	---	---	---
Legal Technical Assistants			
IV	---	---	---
III	---	---	---
II	---	---	---
Accountant			
V	---	---	---
III	---	1	---
II	---	1	---
Clerical	8	2	2
Total	28	14	3

TABLE 17 -- Continued

Job Category[a]	Section	
	Performance Measurement	Total
Environmental Protection Engrs.		
VI	---	3
V	---	10
IV	1	10
III	---	8
II	---	14
I	---	11
Sanitarians		
III	---	6
II	1	11
I	---	8
Sanitary Inspectors		
II	---	5
I	---	1
Resource Planner		
V	---	---
IV	---	---
III	---	---
II	---	---
I	---	---
Legal Technical Assistants		
IV	---	---
III	---	---
II	---	---
Accountant		
V	---	---
III	---	1
II	---	1
Clerical	---	27
Total	2	116

[a]The various job categories' numeric gradations, i.e., VI, V, IV, for the most part indicate paygrade and experience differences among staff members. The EPE VI and Resource Planner V categories indicate section managers. In the case of the Performance Measurement, the Standards, and the Variance Sections, EPE V and IV categories represent section manager positions.

Source: Compiled from personnel records of the Environmental Protection Agency for F.Y. 1971.

TABLE 18

PERSONNEL EMPLOYED IN THE DIVISION OF WATER POLLUTION CONTROL OF THE ILLINOIS EPA, BY JOB CATEGORY AND SECTION, AS OF THE END OF FISCAL YEAR, 1972

Job Category[a]	Section		
	Standards	Variance	Surveillance
Environmental Protection Engrs.			
VI	---	---	2
V	1	1	4
IV	---	---	6
III	---	1	5
II	---	---	6
I	---	1	8
Sanitarians			
III	---	---	3
II	1	---	5
I	---	1	6
Sanitary Inspectors			
II	---	---	3
I	---	---	3
Resource Planner			
V	---	---	---
IV	---	---	---
III	---	---	---
II	---	---	---
I	---	---	---
Legal Technical Assistants			
IV	---	---	---
III	---	---	---
II	---	---	---
Accountant			
V	---	---	---
III	---	---	---
II	---	---	---
Clerical	2	1	2
Total	4	5	63

TABLE 18 -- Continued

Job Category[a]	Section		
	Permit	Facilities Certification	Operator Certification
Environmental Protection Engrs.			
VI	1	---	---
V	2	---	---
IV	5	---	1
III	6	1	1
II	10	1	---
I	10	2	1
Sanitarians			
III	---	---	---
II	---	---	---
I	---	---	---
Sanitary Inspectors			
II	---	---	---
I	---	---	---
Resource Planner			
V	---	---	---
IV	---	---	---
III	---	---	---
II	---	---	---
I	---	---	---
Legal Technical Assistants			
IV	---	---	---
III	---	---	---
II	---	---	---
Accountant			
V	---	---	---
III	---	1	---
II	---	1	---
Clerical	10	3	2
Total	44	10	5

TABLE 18 -- Continued

Job Category[a]	Section	
	Performance Measurement	Enforcement Services
Environmental Protection Engrs.		
VI	---	---
V	---	---
IV	1	1
III	1	---
II	1	---
I	---	---
Sanitarians		
III	---	---
II	---	---
I	1	---
Sanitary Inspectors		
II	1	---
I	3	---
Resource Planner		
V	---	---
IV	---	---
III	---	---
II	---	---
I	---	---
Legal Technical Assistants		
IV	---	1
III	---	2
II	---	4
Accountant		
V	---	---
III	---	---
II	---	---
Clerical	1	2
Total	9	10

TABLE 18 -- Continued

Job Category[a]	Section: Planning	Total
Environmental Protection Engrs.		
VI	---	3
V	---	8
IV	1	15
III	---	15
II	1	20
I	---	22
Sanitarians		
III	---	3
II	---	6
I	---	8
Sanitary Inspectors		
II	---	4
I	---	6
Resource Planner		
V	1	1
IV	2	2
III	3	3
II	2	2
I	2	2
Legal Technical Assistants		
IV	---	1
III	---	2
II	---	4
Accountant		
V	1	1
III	---	1
II	---	1
Clerical	2	35
Total	15	165

[a]See Table 17, p. 80.

Source: Compiled from personnel records of the Environmental Protection Agency for F.Y. 1972.

sewage treatment operations. The addition of this section added 15 new personnel to the DWPC in F.Y. 1972.

Equally as important as the increase in the number of personnel staffing DWPC was the added technical expertise of many of the new employees. The addition of trained lawyers and planners added considerably to the Division's capabilities in understanding and dealing with pollution problems. In addition during F.Y. 1971 and F.Y. 1972 27 envrionmental protection engineers joined DWPC's staff.[6] This increased the surveillance capabilities of the Division considerably.

Another important point is the absence of a formal director for the DWPC. All of the EPA's divisions except DWPC had formal directors by the end of F.Y. 1971. As of the end of F.Y. 1972, the Director of the EPA, Mr. William Blazer, was acting as the Director of the DWPC. To add to those responsibilities the directorship of the DWPC dilutes the effectiveness of both the agency and the division.

Pollution Control Board

The Pollution Control Board (PCB) consists of clerical and legal staff personnel and a five man Board of Directors. Water pollution control is simply one aspect of the Board's total responsibilities. Because of this, only a portion of the Board's time is directed toward water pollution

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[6] The title of sanitary engineer was changed to environmental protection engineer with the change from the SWB arrangements to the EPA arrangements.

activities. Including the five man Board of Directors, the total staff commitment of the PCB during F.Y. 1971 was 14.[7] By the end of F.Y. 1972, the total had increased to 18.[8] In F.Y. 1971 an estimated 10% of the PCB's activities centered around water pollution.[9] This increased to 20% in F.Y. 1972. Time allocated to water pollution activities was converted to full-time equivalencies. This was accomplished by multiplying the percentage of time devoted to water pollution by the respective staff sizes in F.Y. 1971 and F.Y. 1972. The results are presented in Table 19 below.

TABLE 19
ESTIMATED NUMBER OF ILLINOIS POLLUTION CONTROL BOARD PERSONNEL INVOLVED IN WATER POLLUTION CONTROL, BY FISCAL YEAR, 1971-1972

Fiscal Year	Full-Time Equivalent
1971	1.4
1972	3.6

Source: Estimates are based on a phone conversation with Miss Sandra Wiley, Budget Officer of the Pollution Control Board on May 8, 1973.

The data in Table 19 indicates an increase in manpower commitment

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7 Illinois Bureau of the Budget, The Illinois State Budget: Fiscal 1972, (Springfield, Ill.: Bureau of the Budget, 1971) p. 451.

8 Illinois Bureau of the Budget, The Illinois State Budget: Fiscal 1973, (Springfield, Ill.: Illinois Bureau of the Budget, 1972) p. 385.

9 Based on a telephone conversation with Miss Sandra Wiley, Budget Officer of the Pollution Control Board on May 8, 1973.

of approximately 160% from F.Y. 1971 to F.Y. 1972. The primary reason for this large increase centers around changes in the state's water quality standards. For the first year of the Board's existence, old SWB water quality standards were used in PCB enforcement activities. During F.Y. 1972, however, a considerable number of hearings were devoted to the development and passage of new standards.

Summary

Total manpower commitment for the state increased dramatically throughout the late 1960's and the early 1970's. From 1960 through 1966, only 19 F.T.E.'s (specifically related to water pollution activities) were added by state agencies. This amounted to roughly a 95 percent increase. This is in contrast to an increase from 1966 through 1972 of about 405 percent or the addition of 162.31 F.T.E.'s. The largest increase occurred after the passage of the 1970 Environmental Protection Act. For a year by year account of the state's manpower commitment see Table 20.

TABLE 20

TOTAL FTE PERSONNEL COMMITTMENT FOR WATER POLLUTION CONTROL BY THE STATE OF ILLINOIS, BY MAJOR SOURCE, BY FISCAL YEAR, 1960-1972

Fiscal Year	Department of Conservation	Department of Public Health and the SWB	Department of Mines and Minerals	Environmental Protection Agency	Pollution Control Board	Total
1960	0.42	16	4.37	-0-	-0-	20.79
1961	0.74	16	6.64	-0-	-0-	23.38
1962	0.45	15	7.44	-0-	-0-	22.89
1963	1.18	16	10.33	-0-	-0-	27.51
1964	0.64	18	12.13	-0-	-0-	30.77
1965	0.61	22	11.41	-0-	-0-	34.02
1966	0.42	27	12.45	-0-	-0-	39.87
1967	0.35	29	13.08	-0-	-0-	42.43
1968	0.32	36	20.67	-0-	-0-	56.99
1969	0.42	37	20.10	-0-	-0-	57.52
1970	0.26	37	30.36	-0-	-0-	67.62
1971	0.58	-0-	29.17	116	1.4	147.15
1972	0.48	-0-	33.10	165	3.6	202.18

Source: Compiled from Tables 12 thru 19.

CHAPTER V

ILLINOIS' ENFORCEMENT AND SURVEILLANCE EFFORTS IN CONTROLLING WATER POLLUTION

This chapter is a survey of the past and present surveillance and enforcement activities of the Sanitary Water Board, the Department of Conservation, the Environmental Protection Agency, and the Pollution Control Board. The term surveillance is used in a general sense and includes such activities as: 1) granting construction permits for new sewage treatment plants or improvements in existing sewage treatment facilities; 2) periodic inspection of such facilities; 3) testing water samples from the state's rivers, streams, and lakes; and 4) certifying sewage treatment plant operators. Enforcement activities are herein defined as any legal actions taken by individuals, state agencies or private organizations to enforce the statutes and various agency rules and regulations.

Surveillance is extremely important in assuring that state water quality standards are being met. Since all parties using state waters as a means of waste disposal are potential polluters, surveillance is the means by which standards are maintained and violators are detected. Of equal importance with surveillance efforts are the established enforcement procedures for: 1) prosecuting violators and 2) discouraging potential violators. Making comparisons of the past and present enforcement and

surveillance activities of the SWB and the EPA-PCB requires considerable historical detail. The following discussion presents the record for each of the above noted agencies.

Sanitary Water Board Experience

Enforcement activities concerning water pollution, prior to the establishment of the SWB in 1929 are discussed in Chapter II. At this point, a short review of the basic characteristics of the SWB's enforcement and surveillance activities is given in order to provide a framework for the discussion. After 1929, the six man SWB was assigned the duty of water pollution control and abatement on a part-time basis. The Board members, because of their other duties as department heads, devoted only a small portion of their working time to Board activities. As Board members their major activity was holding hearings to establish policy, rules and regulations concerning water pollution surveillance and enforcement procedures. The SWB was the agency primarily responsible for surveillance and enforcement efforts dealing with water pollution.

Surveillance

The SWB's surveillance program concentrated on encouraging the municipalities and sanitary districts to construct sewage treatment facilities.[1] Acting for the Board, the Bureau of Stream Pollution reviewed construction plans for sewage treatment plants. Plans were submitted to the Bureau by

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[1] The number of treatment plants constructed became the SWB's measure of effectiveness and success.

the district or municipality desirous of upgrading old or building new facilities. The Bureau's sanitary engineers reviewed the plans for technical correctness. The engineers tried to assure consistency between the type and size of facility, population of the area to be served, and types of waste to be treated by the facilities. Once the plans were approved, permits were issued allowing construction to begin. The number of construction permits issued between 1960 and 1970 are presented in Table 21 below. It is difficult to compare the number of permits issued with the number of new facilities constructed in a given fiscal year, since the records do not indicate whether a given permit was issued for improvements to existing facilities or for new construction. The data in Table 21 indicates a gradual change from year to year with the number going from 664 permits issued in 1960 to 1,005 in 1970. The yearly increases in the number of permits issued is, as noted earlier, only one measure of the SWB's record of surveillance activities.

Another of the Board's surveillance activities entailed taking water samples from the streams and lakes in the state. According to the Department of Public Health's annual reports, these samples were "...examined for physical, chemical, biological, and bacteriological characteristic and for radioactivity."[2] Samples were taken primarily from: 1) established

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[2] Illinois Department of Public Health, 48th Annual Report, (Springfield, Illinois: Illinois Department of Public Health, 1965) p. 72.

TABLE 21

SEWAGE TREATMENT PLANT CONSTRUCTION PERMITS ISSUED BY THE SANITARY WATER BOARD, BY FISCAL YEAR, 1960-1970

Fiscal Year	Permits Issued
1960	664
1961	665
1962	734
1963	n/a
1964	785
1965	748
1966	790
1967	845
1968	965
1969	1,049
1970	1,005

Source: Illinois Department of Public Health, Annual Report, (Springfield, Illinois: Illinois Department of Public Health) surveyed from the 44th to the 53rd editions.

sampling stations at various locations along the states waterways and 2) sewage treatment facilities throughout the state. During F.Y. 1960 the Bureau of Stream Pollution monitored 180 surveillance stations along waterways, and sampled effluents from 500 sewage treatment plants.[3] By 1970, the final year of operation of the Bureau of Stream Pollution, the number of regular surveillance stations had increased to 505 and the number of sewage treatment plants had increased to 1635. During this final year, 6,300 stream samples and 4450 effluent samples were collected for analysis.[4] This increase in the number of water samples taken by the SWB was in part a response to the Federal Water Quality Act of 1965. As noted above there were only 180 stream sampling stations in 1960. This number had increased to 280 by 1965. But, in a similar 5 year period from 1965 to 1970 the number of sampling stations increased by 225. This increase is considered an improvement in surveillance activities.

An important part of the state's water pollution abatement program consisted of establishing adequate sewage treatment plants. As noted earlier, checks on these facilities consisted of inspecting plans for plant construction and inspecting plant effluents. In addition, the actual operation of the plants were monitored. A poorly operated plant, even

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3 Illinois Department of Public Health, 44th Annual Report, (Springfield, Illinois: Illinois Department of Public Health, 1961) pp. 54-55.

4 Illinois Department of Public Health, 53rd Annual Report, (Springfield, Illinois: Illinois Department of Public Health, 1970) p. 94.

though the engineering design was adequate for preventing pollution, was a pollution hazard. The two surveillance techniques used to monitor the operation of the plant were: 1) education and certification of treatment plant operators and 2) operational inspection visits to the plants by SWB personnel. During the early 1960's the SWB began to require the certification of treatment plant operators. Prior to that time certification was encouraged but not required. Certification required that a plant operator attend a brief training program. The program familiarized him with the general operating requirements for the treatment system to operate efficiently. The number of operators certified in this familiarization program has increased steadily through the 1960's from 367 in 1960 to 1400 in 1970. The number of inspection visits made by Bureau of Stream Pollution personnel increased from 2,683 in 1960 to 3,250 in 1970.

Many of the surveillance functions mentioned above were performed by the Bureau's sanitary engineers. These engineers were assigned to Public Health Regions throughout Illinois. Other pollution abatement functions performed by these engineers included: 1) advising companies on how best to integrate water pollution control devices into their production processes and 2) developing complaints on violations of the SWB Act.[5] As can be seen, the general surveillance activities of the SWB increased considerably throughout the 1960's. Surveillance activities are, however, only

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[5] Based on a personal interview with Mr. Richard Nelle, Chief Sanitary Engineer, Environmental Protection Agency in Springfield, Illinois on August 10, 1973. Mr. Nelle considered the broad orientation of the SWB sanitary engineers to be in stark contrast to the very specialized functions of present day EPA personnel.

one part of an effective pollution abatement and control program. The surveillance efforts must be matched with an effective enforcement program.

Enforcement

The handling of enforcement activities by the SWB was done in various ways. Enforcement activities usually began with the discovery of a violation of SWB Rules and Regulations. Once a violation was discovered a sanitary engineer registered a complaint with the SWB. If the allegations were warranted, the SWB issued an order for the violator to abate pollution. This abatement order generally included a deadline which allowed the violator a reasonable amount of time to comply with SWB Rules and Regulations. In most cases these abatement orders did not direct the respondent to construct treatment facilities. The absence of such a directive allowed the party in violation, to decide the most appropriate approach to solving the problem. For example, a respondent might have ceased doing whatever placed him in violation; rerouted the waste in some way such that pollution would no longer result; or constructed a new treatment facility.

Regardless of the avenue chosen, the abatement technique had to meet the approval of the Bureau of Stream Pollution and the SWB. In the event that a respondent failed to meet the requirements of the abatement order, further action by the Board was taken. Possible actions that could be taken by the Board included: referring the case to the Office of the Attorney General for possible litigation in the courts; calling for a formal public hearing before the Board, or calling for an informal conference (not public). Involved in the two latter alternatives were the party filing the complaint

(usually a Bureau sanitary engineer), the respondent (accused), and possibly a representative of the Attorney General's Office.[6] The general thrust of both the formal and informal Board hearings was to determine the possibility of reaching an agreed upon abatement plan without going to court action.

If informal conferences were held, the following procedure was generally used. First, the alleged violator was asked to compile and present an explanation of the episode in question and propose a settlement offer. Second, the settlement offer, once submitted, was reviewed by the representatives from the Bureau and the Attorney General's Office. Third, the settlement conditions agreed upon by the conference attendants were presented to the SWB for approval or denial. In some cases, money penalties were assessed. Money penalty amounts were determined on the basis of "reasonableness" and judged on a case by case basis. There were no specific guidelines established by the Board to determine the money amounts involved. If the informal conferences proved unfruitful, other actions were taken.

In deciding whether to file formal charges with the Attorney General or grant a continuance of the original abatement order, the Board reviewed the respondent's record for such factors as progress made toward compliance and peculiar or unusual problems encountered in attempting compliance. In the event the case was referred to the Attorney General, information, including such factors as progress made toward compliance and records of

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6 The Bureau staff member lent an engineering technical orientation to the procedure while the Attorney General's representative handled the legal considerations.

any conferences held, was made a matter of public record by the Board. According to Mr. Clarence Klassen, Technical Secretary for the SWB, the SWB did not like to use the courts as a means of obtaining compliance except as a last resort.[7] In essence, the primary tool used by the SWB in encouraging compliance with the Rules and Regulations was moral suasion. The Board preferred to hold conferences to discuss the various aspects of the problems. The Board's primary goal was to bring about a mutual agreement wherein all parties were at least satisfied to some extent. To afford themselves a bargaining position in the conferences, the Board could threaten to use money penalties; to refuse to issue permits allowing construction of new facilities or connections with existing facilities; and to recommend court action. There were some instances, although very few, where the Board required a respondent to post bond to guarantee performance by a specified date. If the requirements of the Board were not met in the time stipulated, the bond of the respondent would be forfeited. According to Mr. Richard Nelle, Chief Sanitary Engineer of the Environmental Protection Agency, performance bonds were usually used in cases dealing with residential subdivision developments. Generally, the bond was to guarantee that no buildings would be occupied without proper compliance with sewage connection regulations. At times, the bonds were used when the person wishing to construct or install pollution control

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7 Based on a personal interview with Mr. Clarence Klassen, one time Technical Secretary of the SWB, in Springfield, Illinois in April, 1972.

equipment presented Bureau personnel with plans entailing the use of new techniques for waste treatment. The bond, in this instance, was used by the Board as an expression of "responsibility" on behalf of the party making the permit request. If the new technique did not work as efficiently as proposed, the party would be responsible for upgrading or constructing new facilities to meet the standards under existing rules and regulations. The Board reasoned that posting a bond would discourage persons from "just trying any old thing" without reasonable assurance that it would perform adequately.

The minutes from both the formal and informal conferences held by the SWB over the years were not available to the author.[8] A detailed presentation of Board enforcement activities concerning pollution violators, is therefore, not possible. As evidence of Board enforcement activities, however, the annual number of case referrals to the Attorney General's office and the amount of money penalties requested, are used. These data, for the year 1963 through 1970, are presented in Table 22 below.

Enforcement activities in the early 1960's, for the most part, involved fish kills. A polluter, charged with killing fish, as is still the case, was required by the SWB to reimburse the state for the estimated number of fish killed. The dollar amount payable to the state was

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[8] In attempting to secure this information the following sources were researched or contacted: State of Illinois Library, The Environmental Protection Agency, and Mr. Clarence Klassen, Technical Secretary of the SWB and first Director of the Environmental Protection Agency.

TABLE 22

NUMBER AND TYPE OF CASES REFERRED TO THE STATE OFFICE OF THE ATTORNEY GENERAL BY THE SANITARY WATER BOARD, BY FISCAL YEAR, 1963-1970

Fiscal Year	Number of[a] Referrals	Violation[b]					Action Requested[c]				Money Charges	
		P	F	R	I	O	P	D	P&I	MIP	Fish Kills	Penalties
1963	2	1	1	-	-	-	-	1	1	-	$ 3,007	$ 2,900
1964	4	4	-	-	-	-	3	-	1	-	0	2,800
1965	14	11	3	-	-	-	4	3	7	-	8,260	12,500
1966	11	7	1	-	3	-	8	1	2	-	737	17,300
1967	15	13	1	-	1	-	10	1	4	-	1,233	41,200
1968	23	14	5	-	3	1	10	5	7	-	5,544	10,100
1969	57	33	6	18	3	1	28	7	14	12	3,966	53,100
1970	71[d]										7,190	59,279

[a]Some referrals entailed more than one violation or requested action. Because of this, the number of referrals will not necessarily equal the number of violations alleged or actions requested.

[b]The code letters are defined as follows: pollutional discharge (P), fish destruction (F), Board Rules and Regulations (R), installation of sewage works without a permit (I), an order of the Board not complied with (O).

[c]The various actions requested are coded as follows: penalties (P), damages to be recovered for fish killed (D), penalties and injunction (P&I), and appropriate action--mandamus, injunction, and penalty--(MIP).

[d]The codes for 1970 were not available.

Source: Compiled from the records of the Sanitary Water Board held by Mr. Richard Nelle, Chief Sanitary Engineer with the Environmental Protection Agency in Springfield, Illinois.

determined by the commercial value of the various types of fish killed.[9] In the strict legal sense, the payment for fish kills was not considered a "money penalty" but only as reimbursement for the dollar or commercial value of the fish. The Board's attitude was that a money penalty was a payment to be made for violating the act. A money penalty was not necessarily reflective of any specific damage, such as the number of fish killed. As noted earlier there were no specific guidelines for determining money penalty amounts. Thus, money paid to the state for fish kill episodes was viewed as a reimbursement to the state for damage to the state's fish supply.

In addition to the above record, some information concerning prior SWB enforcement activities can be obtained from current PCB hearings. Many cases brought before the current Pollution Control Board were also reviewed and passed on previously by the SWB. One uses such information, however, with a degree of caution.[10] One Pollution Control Board hearing

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9 See Appendix III, p. 190, for a detailed presentation of: 1) the location, 2) number and type of fish, and 3) the primary cause of major fish kills from 1963-1972.

10 One of the Pollution Control Board's first orders of business was to "prove its salt". In other words to prove it was more effective than the agency it replaced. Thus, in the early PCB hearings, the SWB track record, implicitly and at times explicitly was highlighted as reflecting failure on the part of the SWB to effectively perform its duties. However, before one should make such judgements, several factors should be reviewed; funding by the state, number of personnel to perform such functions, the part-time nature of the SWB members, the limited commitment of the Attorney General's staff, the climate of opinion as to how best to deal with pollution problems, and other similar factors.

which lends insights into the SWB enforcement activities is PCB 71-19 (Spartan Printing Company Division World Color Press, Inc. v. EPA). To capture the flavor and general attitude of the SWB toward enforcement activities a rather lengthy quote is cited:

> The story begins in 1966. On August 4, of that year, Clarence Klassen, Technical Secretary to the Sanitary Water Board, directed a letter to Spartan...stating that a sample had been taken of the Spartan waste and that the sample was "black, of thick consistency, and apparently almost pure ink with some solvent mixed in." The letter went on to say that the "outlet stream downstream from this discharge indicated that there were obnoxious odors and definite signs of pollution." Spartan was told to eliminate "immediately...any pollutional effects" to the stream. After an exchange of letters in which Spartan asked for a meeting with the technical staff of the Sanitary Water Board, a meeting was finally held on December 12, 1966, at the Spartan plant. The record does not disclose exactly what was discussed at that December meeting, but within a month from that date, Spartan hired E.M. Webb, a consulting engineer from Carbondale. It is apparent that Webb was told by Spartan to find a solution to its waste problem "without any strings attached." After an initial examination, Webb advised Spartan that it had an "extremely complex problem." Webb was still studying the problem when another letter was received by Spartan from Klassen. This letter, dated August 10, 1967, acknowledged the fact that Webb had been hired by Spartan to find an answer to the problem, but that "no action had been taken...and the discharge is still causing pollution of the receiving stream." Spartan was told in that letter to take "positive steps" to "eliminate or properly treat the discharge." Spartan had 30 days within which to advise the Sanitary Water Board of what action it was going to take. Spartan's first reaction was to attempt to negotiate with the City of Sparta to take the wastes into the municipal waste treatment plant. This eventually failed after the city hired engineers to study the problem and concluded that it could not handle the waste stream for some undefined reason. In a letter dated February 1, 1968, Spartan advised Klassen of a specific time schedule (for the first time) for completion of a project which would involve complete treatment of the wastes from the Spartan plant. Spartan admitted in that letter that "progress has been a bit slow in connection with the pollution problem at our plant." The date of completion stated in the letter was August 15, 1968. Spartan advised Klassen in a letter

> dated June 27, 1968, that Webb had run into "certain unique problems" with Spartan's waste...and needed more time. Speaking on behalf of the Sanitary Water Board, on July 10, 1968, Klassen approved the new schedule which called for completion of the project on January 21, 1969. Two months later, Webb was still trying to solve the "complex" problem, and he hired Dr. J.W. Chen of Southern Illinois University to do a "treatability study" of the Spartan waste. This study was to be completed within 6 months. A new schedule was approved by the Sanitary Water Board calling for the completion of the waste treatment facility by August 29, 1969, although Klassen expressed concern that a year would transpire before the waste treatment facility would be put in operation. Needless to say, the facility was not complete on the date promised, and ordered, and as a result, Klassen directed another letter to Spartan on December 30, 1969, indicating that the latest sample taken from the Spartan plant indicated a COD of 8340 milligrams per liter. A meeting was requested with Spartan. A preliminary engineering study was submitted to Klassen by Webb on January 7, 1970. This study was, according to the last schedule ordered by the Sanitary Water Board, to be completed by September 25, 1968. A meeting was held at the Sanitary Water Board offices on January 15, 1970 to discuss the proposed plans, and as a result of the meeting, Spartan committed to a completion schedule which would have the treatment facility in operation within nine months of that date (6 for Phase I and 3 thereafter for Phase II). This schedule was confirmed by Klassen in a letter dated February 11, 1970. Purchase orders were entered into by Spartan to begin installation of the waste treatment facility.[11]

This quote seems to indicate that the SWB exercised patience and moral suasion in dealing with parties on issues pertaining to the Act and to the rules and regulations established by the Board. This is in accord with the position taken by Clarence Klassen, Technical Secretary of the SWB and the first Director of the EPA, who said that: "The concept of the Sanitary Water Board was to secure the prevention, abatement and control

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[11] Pollution Control Board, Pollution Control Board Opinions, PCB 71-19, Vol. 21, pp. 21-22. Other examples of such proceedings can be found in the PCB Opinions in PCB 70-8, Vol. 1, pp. 217-221; PCB 71-11, Vol. 1, pp. 481-497 and PCB 71-8, pp. 441-448. For a summary of each Board opinion concerning water pollution, from July 1, 1970 through June 30, 1972, see Appendix IV, pp. 202-245.

of pollution through persuasive and active cooperation of the alleged polluter. This was natural for it was engineering oriented whose (SIC) training is to solve a problem".

Two approaches were used by the SWB to accomplish its general objective of effective water pollution control. These were: 1) the construction of municipal sewage treatment facilities and 2) the construction of industrial waste treatment facilities. The SWB's record in providing sewage treatment for the state is presented in Tables 23 and 24 below. By the end of F.Y. 1970, an estimated 82.8 percent of Illinois' population was served by some type of sewer. Of that 82.8 percent, 99.8 percent were served by sewage treatment facilities.[12] As of June 1970, the Federal Water Quality Administration noted that only 68 percent of the U.S. population was served by sewers. Of that 68 percent, only 86 percent was receiving treatment.[13]

Department of Conservation

As noted earlier, the Department of Conservation has legislative responsibility for working with EPA (prior to July 1, 1970 with SWB) personnel investigating pollution caused fish kills. The procedure for fish kill investigations generally entails the determination of: 1) the cause of the fish kill as to type and nature of the pollutant;

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12 The term sewer refers to a system of pipes that collect and deliver waste water to treatment plants or receiving streams. The term sewage treatment facility refers to a series of tanks, screens, filters, and other processes by which pollutants are removed from water.

13 United States Department of Interior, Clean Water for the 1970's A Status Report, (Washington, D.C.: U.S.G.P.O., 1970) p. 4.

TABLE 23

POPULATION OF ILLINOIS SERVED BY SEWERS AND SEWAGE TREATMENT FACILITIES, 1880-1970

Year	Total Population	Population Served by Sewers	Population Served by Sewage Treatment Facilities [b]
1880	3,077,871	671,831	0
1890	3,826,352	1,499,327	0
1900	4,821,550	2,480,785	21,877
1910	5,638,591	3,413,120	165,781
1920	6,485,280	4,481,602	424,706
1930	7,630,654	5,837,511	2,582,898
1940	7,897,241	6,065,726	5,461,756
1950	8,712,176	6,708,545	6,196,777
1960	10,012,612	7,659,473	7,388,658
1965[a]	10,650,000	8,629,000	8,607,000
1970[a]	11,050,000	9,152,000	9,133,500

[a]Total population figures are estimated.

[b]Includes populations in 1) unincorporated areas of (a) sanitary districts, (b) subdivisions, housing, apartments, nursing homes, and trailer parks; 2) State institutions having own sewage works, and 3) State institutions connected to municipal systems. This does not include subdivisions and rural areas which utilize individual septic tank systems.

Source: These data were presented with a speech given by Mr. Clarence Klassen, one time Technical Secretary to the Sanitary Water Board and first director of the Environmental Protection Agency, in Springfield, Illinois in March, 1971.

TABLE 24

PERCENT OF TOTAL POPULATION SERVED BY SEWERS AND SEWAGE TREATMENT FACILITIES, 1880-1970

Year	Percentage of Total Population Served by Sewers[a]	Percentage of Total Population Served by Sewage Treatment Facilities	Percentage of Sewered Population Served by Sewage Treatment Facilities
1880	21.8	0.0	0.0
1890	39.2	0.0	0.0
1900	51.5	0.45	0.88
1910	60.6	2.94	4.86
1920	69.2	6.55	9.48
1930	76.5	33.80	44.30
1940	76.8	69.20	90.20
1950	77.0	71.20	92.40
1960	76.5	73.80	96.50
1965	81.0	80.80	99.70
1970	82.8	82.60	99.80

[a] The term sewer refers to a system of pipes that collect and deliver waste water to treatment plants or receiving streams. The term sewage treatment facility refers to a series of tanks, screens, filters, and other processes by which pollutants are removed from water.

Source: See Table 23, p. 104.

2) the types of fish involved whether game or forage; 3) the commercial value of the fish killed; and 4) the extent of damage to the creek, stream, or lake.[14] The pollutant causing the kill is generally identified by a Conservation Department fish biologist working with a surveillance officer from the EPA. The first step in identifying a pollutant entails a determination of the area affected by the pollution episode. Once this is done, water samples are taken at three locations. For example, when a kill occurs on a stream, samples are taken upstream from the kill, within the kill area, and down stream from the area. This allows the investigators to identify the water pollutants within the kill area that are not present elsewhere in the stream. Once the water samples are taken, the fish biologist begins to identify the fish killed. The fisheries' biologist counts and identifies each specific species, such as, bass, trout, carp or some other fish. The Department of Conservation maintains a list of prices which reflect the commercial value of the various types of fish. These prices are used by the biologist to determine the total value of the fish killed. Once the cause of kill and number of fish are determined, the polluter is sought.

If identified, the polluter is notified of the fish kill and the value of the fish involved. Within the EPA, the Water Pollution Control

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14 A summary of fish kill reports by fiscal year from 1963 through 1972 is presented in Appendix III of this study. Because there was no Federal Pollution Caused Fish Kill report found for 1970, the detail table for 1970 is not included in the Appendix.

Division's Surveillance Section and Enforcement Services Section prepare formal charges against the polluter and request a settlement. The money amount requested together with appropriate violation charges are submitted to the Attorney General's staff for proceedings before the Pollution Control Board for final decision on the case. Since previous enforcement arrangements did not recognize the SWB as an administrative tribunal, the Attorney General's staff had to take cases through the circuit court system if a settlement could not otherwise be made. The annual record of fish kills is presented in Table 25.

Some indication of the limited success of the program for retrieving the value of the fish is presented in Table 26 below. The data indicate a disparity between the estimated value of the fish killed and the amount of funds obtained through settlements or litigation. It should be emphasized again (as it was in Chapter III) that the money recovered through these actions does not include the amount that would be required to restore the polluted area to its original state. Monies obtained from the enforcement proceedings are placed in the Game and Fish Fund of the Department of Conservation. According to Mr. Harth, Director of the Division of Fisheries for the Department of Conservation, the fish killed are not replaced. The area is left to rejuvinate the balance of fish on its own.[15]

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15 Based on a personal interview with Mr. William Harth of the Division of Fisheries in Springfield, Illinois on April 23, 1973.

TABLE 25

FISH KILLS CAUSED BY POLLUTION EPISODES REPORTED IN ILLINOIS, BY NUMBER, LOCATION, AND COMMERCIAL VALUE, BY FISCAL YEAR, 1960-1972

Year	Number	Involved		Estimated Total Number of Fish Killed	Commercial Value of Fish
		Streams Miles	Lakes Acres		
1960	13	81.65	---	207,729	$ 33,797.82
1961	23	150.00	---	5,648,171	434,457.70
1962	14	127.80	---	295,111	60,590.37
1963	37	184.60	375.70	805,278	84,453.48
1964	20	150.65	201.30	3,950,307	33,254.30
1965	19	98.15	32.40	444,326	48,590.00
1966	13	77.10	0.41	1,331,526	31,018.00
1967	11	50.25	---	160,562	11,643.00
1968	10	59.50	1,187.00	379,107	16,662.00
1969	13	49.60	---	313,642	91,942.00
1970	8	43.60	---	106,194	14,050.09
1971	18	90.15	---	426,185	31,876.00
1972	15	82.55	1.14	106,194	20,549.10
Total	214	1,245.60	1,797.95	14,285,625	912,883.86

Source: Based on information obtained during a personal interview with Mr. William Harth, Director, Division of Fisheries, Department of Conservation, on April 23, 1973.

TABLE 26

NUMBER OF AND MONEY RECOVERED FROM FISH KILL SETTLEMENTS BY THE STATE OF ILLINOIS, BY FISCAL YEAR, 1960-1972

Year	Number of Settlements[a]	Money Amount of Settlement	Commercial Value of Fish Killed
1960	n/a	$ 1,590.00	$ 33,797.82
1961	-0-	-0-	434,457.70
1962	-0-	-0-	60,590.37
1963	9	32,906.41	84,453.48
1964	10	16,382.58	33,254.30
1965	1	500.00	48,590.00
1966	1	450.00	31,017.78
1967	7	12,696.00	11,643.00
1968	3	1,335.50	16,662.01
1969	2	4,248.24	91,941.52
1970	1	3,750.00	14,050.00
1971	4	6,653.10	31,876.00
1972	n/a	n/a	20,549.10
Total	38	80,511.83	912,883.86

[a]Settlements made in a given year are not necessarily on cases which were developed in that year.

Source: Illinois Department of Conservation, Annual Report, (Springfield, Illinois: Illinois Department of Conservation) surveyed from 1960 through 1972.

Environmental Protection Agency-Pollution Control Board Experience

Under the arrangements set forth in the Environmental Protection Act of 1970, surveillance and enforcement activities are separated. The EPA is responsible for surveillance while the PCB has primary responsibility for enforcement. Surveillance activities are divided among four sections of the EPA's Division of Water Pollution Control--Permit Section, Surveillance Section, Performance Measurement Section, and Operator Certification Section. Although not directly involved in surveillance activities, the Enforcement Services Section is added to the current discussion. The ESS personnel work directly with the personnel of the above noted sections preparing enforcement actions whenever such are necessary. The general surveillance activities of each section are subsequently reviewed for F.Y. 1971 and F.Y. 1972. To see how procedures changed after the organizational shift from the SWB to the EPA, surveillance data for F.Y. 1970 are included in the subsequent discussion where appropriate.

Surveillance

The review of proposed sewage treatment plant construction plans is important to the state's overall surveillance program. If plants are constructed that are not consistent with the population and area to be served by the plant, water pollution can easily result. During F.Y. 1971, the review of proposed treatment plant construction plans led the Permit

Sections personnel to issue 916 construction permits.[16] This is in contrast to the 1,005 permits issued in F.Y. 1970 by Bureau of Stream Pollution personnel. This decrease from F.Y. 1970 to F.Y. 1971 is partially explained by the general confusion generated within the EPA in its early days.[17] By the beginning of F.Y. 1972, however, the Agency had eliminated most of the internal disturbances creating the confusion. During F.Y. 1972, the Permit Section approved and issued permits for over 1,200 of the construction plans reviewed.[18] This represents a 32.5 percentage increase in activity from F.Y. 1971 to F.Y. 1972. This general increase in Permit Section activity was matched by a similar increase in activity in the Surveillance Section.

The Surveillance Section (SS) is primarily concerned with both monitorin water pollution levels from treatment plant effluents and locating violators. Monitoring activities include field inspection visits to and taking effluent samples from sewage treatment plants around the state. During F.Y. 1972, SS personnel conducted 3,377 plant inspections. This number is an increase over the 3,250 visits conducted during the SWB's final year. The additional surveillance activities of the SS personnel led to the development of 7 enforcement actions in F.Y. 1971 and 56 in F.Y. 1972. This sharp increase

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16 Illinois Environmental Protection Agency, Our Shared Environment: A Report of Progress by the Illinois EPA, F.Y. 1972, (Springfield, Illinois: Illinois Environmental Protection Agency, 1972) p. 12.

17 In the early stages a funding and hiring freeze was placed on the EPA resulting in the resignation of the Director, Mr. Klassen and Mr. Willia Blazer took his place.

18 Ibid., Our Shared Environment, p. 12

in enforcement actions stands as an indication of the change in philosophy that occurred with the switch from the SWB to the EPA-PCB. As noted earlier, the SWB concentrated on encouraging the construction of treatment plants as a central goal while the EPA-PCB thrust centers around punitive actions to discourage pollution. The general duties of the SS personnel in monitoring water pollution levels are complimented by the activities of the Performance Measurement Section. While the Surveillance Section is concerned with sampling only treatment plant effluents, the Performance Measurement Section (PMS) activities center around monitoring pollution levels in the state's rivers, streams and lakes generally. Unlike the SS personnel, however, PMS is not involved with developing enforcement actions.[19] According to Mr. Dan Goodwin, Director of the PM Section, PMS personnel take stream and lake water samples, test the samples for the various pollutional parameters, and compare test results against PCB standards.[20] The number of sampling stations throughout the state used in the monitoring program increased to 618 by the end of F.Y. 1972. This represents an increase of 113 sampling stations over those operated by the SWB in F.Y. 1970. Sample testing is done in EPA laboratories located in Chicago, Champaign, and Carbondale. Some tests for pesticides are analyzed at laboratories in Springfield.

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19 Based on a personal interview with Mr. Dan Goodwin, Director, Performance Measurement Section of the Illinois EPA, in Springfield, Illinois on August 11, 1973.

20 In March, 1972, the Pollution Control Board passed new water quality standards. These standards superseded those passed by the SWB during 1966-1968.

One factor to consider in discussing a monitoring program is the technical ability of the monitoring agency to test the water for pollutants. Maximum allowable levels for various pollutants are set out in PCB's Rules and Regulations for water quality standards. For example, the statewide mercury standards are set at .5 ppb.[21] But one crucial factor in determining this allowable limit is the ability of the agency personnel to test for mercury in quantities smaller than .5 ppb. Techniques for measuring mercury in smaller quantities have not yet been developed.[22] According to Mr. Goodwin, however, the Agency's current technical capabilities are such that there are no critical concerns as regards the health of the citizens of Illinois. One might question, however, what Mr. Goodwin means by "no critical concerns".

Activities such as taking and testing water samples are integral parts of any surveillance program. Of tantamount importance, however, is the testing and certifying of sewage treatment plant operators. If the various treatment plants are ineffectively operated, water pollution is inevitable. All matters pertaining to certifying treatment plant operators are dealt with by the Operator Certification Section. The efforts of this Section's personnel led to a total of 1,708 state certified treatment plant operators by the end of F.Y. 1972. This constitutes an increase over 1970 of 308 operators. The certification procedure entails a brief

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21 The notation ppb means parts per billion cubic feet of water.

22 Based on an interview with Mr. Dan Goodwin.

training period followed by a test and subsequent granting of a completion certificate. Ideally, the operator should be trained while the plant he is to operate is being constructed. Frequent visits to the construction site during training allows the operator to become familiar with the workings of his specific plant.

When any of these four DWPC Sections discussed above encounter violations of the Act, the Enforcement Services Section (ESS) is notified. As noted in Chapter IV, the ESS was added to the DWPC in early 1972. The impetus for this organizational change came from conflicts that occurred between EPA's legal staff and the legal staff of the Office of the Attorney General. As noted in Chapter II, the Attorney General (AG), under Sections 42 and 43 of the 1970 Act, has the authority to represent the people in cases involving violations of the act. Prior to 1972, the EPA's Division of Legal Services (DLS) contained lawyers who likewise were authorized to litigate pollution cases for the people. The EPA-AG interagency dispute centered around the interpretation of the Act concerning who was to represent the people before the PCB. The dispute ended with the DLS litigation lawyers either leaving or accepting advisory roles within one of the EPA's control sections. Primary responsibility for litigation of legal questions concerning PCB problems was shifted to the Attorney General's Office.

Once a violation is noted, the technical advisory staff of the ESS proceed to gather evidence and put it into proper form for presentation before the PCB. Whenever appropriate, Enforcement Services personnel and personnel of other sections involved meet with the alleged violator

and attempt to clarify the charges. At this meeting, if possible, a course of action is agreed upon by all parties. The allegations, evidence, and any negotiated settlement are then presented before the PCB by a member of the Attorney General's staff for appropriate action.

Enforcement

During the Pollution Control Board's first two years, enforcement actions were taken both in variance and violation proceedings. Variance proceedings generally center around a party being unable to meet a construction deadline set forth in an approved construction permit or a PCB order directing compliance with the Rules and Regulations (Water Quality Standards) by a given date. A variance is a permit excepting the applicant from the Board's Rules and Regulations for a specified period of time. The time on variances is limited to one year under Title 9, Sect. 36 (b) of the 1970 Act.[23] The Board has referred to a variance as being in essence a "license to pollute".[24] Once filed, the Board reviews variance applications and either grants or denies the variance. If the variance is granted, the Board has the authority to impose specific conditions. This authority is provided under Title 9, Sect. 36 (a) of the Act.[25]

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23 Illinois, Statutes (1970), Title 9, Sect. 36 (b), 891.

24 Pollution Control Board Opinions, Vol. 2, PCB 71-83, p. 613.

25 Illinois, Statutes (1970), Title 9, Sect. 36 (a), 890.

In addition to the Board's activities relative to variance proceedings, the Board reviews complaints based on alleged violations of the Act. Compalints are made by the EPA, the Attorney General, private citizens, or any other parties or organizations finding a need for such action. In reviewing the evidence presented in these complaints, the Board may: 1) issue a cease and desist order; 2) impose money penalties; 3) require the posting of a surity or performance bond to assure correction of the violation; 4) revoke construction permits granted; and 5) dismiss the complaint. One alternative to revoking a permit is the issuance of a sewer ban. Sewer bans, simply forbid any new connections to existing sewage facilities for a set period of time. The sewer ban is a tool used by the Board against sanitary districts and municipalities to encourage rapid compliance with the Act and the Board's Rules and Regulations Since the respondent is directed to make no further connections to its existing sewage treatment system, one primary effect of this instrument may be the halting of economic growth and development in the geographic area concerned.

A review of the opinions and orders issued in the various Board proceedings is presented to demonstrate how the regulatory instruments mentioned above: variances, performance bonds, cease and desist orders, money penalties, and sewer bans, have been used. Because these opinions are so important to this study, many lengthy quotes in the words of the Board members are used. Paraphrasing the opinions would jeopardize the tone and spirit in which they have been made. Before reviewing the various opinions and orders of the PCB, the general guidelines or con-

siderations the Board is directed to use in establishing its opinions and administrative orders are presented.

Under Title 7 of the Act, the Board's authority in determining and passing rules and regulations is explicitly stated. Section 27 of this Title states:

> In promulgating regulations under this Act, the Board shall take into account the existing physical conditions, the character of the area involved, including the character of surrounding land uses,..., the nature of the existing...receiving body of water, and the technical feasibility and economic reasonableness of measuring or reducing the particular type of pollution.[26]

In judging these various rules and regulations Title 8, Section 33 (c) directs the Board as follows:

> In making its orders and determinations, the Board shall take into consideration all the facts and circumstances bearing upon the reasonableness of the emissions, discharges, or deposits involved including, but not limited to:
>
> 1. the character and degree of injury to, or interference with the protection of the health, general welfare and physical property of the people;
> 2. the social and economic value of the pollution source;
> 3. the suitability or unsuitability of the pollution source to the area in which it is located...;
> 4. the technical practicability and economic reasonableness of reducing or eliminating the emission, discharges, or deposits resulting from such pollution sources.[27]

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[26] Ibid., Title 7, Sect. 27, 889.

[27] Ibid., Title 8, Sect. 33 (c); (1) (2) (3) (4), 890.

The underlying theme of the Board's activities seems to be centered around assuring citizens a healthy and clean environment. The Board is directed to compare relative private and social costs and benefits in advancing its actions and opinions. The economic criteria used by the Board in its opinions generally have been stated in terms of costs versus benefits. As is shown later in the study, however, there has been a general failure by the Board to bring adequate cost-benefit information to bear on opinions.[28]

One of the first cases brought before the Board dealing with water pollution (PCB 70-7, League of Women Voters v. North Shore Sanitary District) is important for several reasons.[29] This case is primarily important because it was the first water pollution action wherein the constitutional authority of the 1970 Act and the PCB were challenged. Under the SWB, as noted earlier, the Attorney General litigated enforcement proceedings through the circuit courts based on SWB recommendations. With current arrangements, the PCB stands as an administrative law tribunal with statutory authority for levying fines and penalties mentioned above. Were this latter PCB enforcement authority to be stricken as unconstitutional the PCB would be placed in the same position as the old SWB. No improvement

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28 A discussion of cost-benefit analysis on a theoretical basis is presented in Chapter I of this study.

29 Opinions, Vol. 1., PCB 70-7, pp. 35-39, p. 105, pp. 369-396, pp. 433-434, pp. 655-656. See also PCB 71-36 and PCB 71-343. A summary of each case is presented in Appendix IV. For PCB 70-7 see p. 204; PCB 71-36, pp. 212-213; PCB 71-343, pp. 230-231.

in prosecutory authority and ability would have been made.[30] For this reason, considerable space is alloted to the question of constitutional authority in this study.

The NSSD case began on September 1, 1970 when the Chicago Chapter of the League of Women Voters (LWV) filed a complaint against the North Shore Sanitary District (NSSD) alleging the pollution of Lake Michigan.[31] The North Shore Sanitary District operates six sewage treatment plants in the Chicago Metropolitan Area. It was noted in the PCB hearing of November 9, 1970 that "...all but one of the District's six plants (were) grievously overloaded even under normal conditions."[32]

In response to the initial complaint by the LWV, the NSSD filed a Motion to Dismiss the case arguing that:

> ...the Board lacks jurisdiction of the complaint; that the League of Women Voters lacks standing to sue; that the League has not been authorized by its members to sue; and that the complaint is duplicitous.[33]

PCB's Chairman, David Currie, responded to the above Motion to Dismiss in the Board opinion on the case as follows:

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30 This PCB authority is considered as one of the major advantages of the 1970 Act over the 1929 SWB Act.

31 Opinions, Vol. 1, PCB 70-7, pp. 35-39. See Appendix IV, p. 204.

32 Opinions, Vol. 1, PCB 70-7, p. 372.

33 Ibid., p. 35.

The first objection, that of lack of jurisdiction, appears to be based upon the other three objections, as no independent reasons are suggested for this position and as none are apparent to us. The second and third objections are not worthy of serious consideration. The League is a corporation, and its Board of Directors specifically authorized the filing of this complaint under clear bylaws giving it the power to do so. A corporation, like any other legal entity, is a "person" under section (3)i of the Act. We reject the half-hearted attempt to inject the defense of ultra vires; that archaic principle is not written into the Environmental Protection Act. The words and the purpose of the statute are clear: Anybody may file a complaint. The Attorney General joins the District in arguing that the complaint is "duplicitous" because the Attorney General has filed a suit against the District in the Circuit Court of Lake County. This position, if accepted, would turn established principles of administrative law squarely on their heads and subvert the purpose of the Environmental Protection Act. The reports are replete with decisions invoking the familiar doctrines of primary jurisdiction and exhaustion of remedies, instructing litigants to seek relief from administrative tribunals before proceeding in court. The present statute plainly attempted to centralize initial decision-making in pollution cases in a single specialized Board, specifically combining authority over air and water pollution..., and other environmental problems in a single tribunal in recognition of the advantages of experience and continuity in administering the law in a field often requiring considerable technical knowledge. This policy of centralization is especially evident in the case of private complaints, for the private litigant is actually forbidden by statute to go to court until he has sought and been denied relief by the Board (Section 45 (b)). The fact that the provision for dismissal of "duplicitous" cases does not apply to complaints filed by the Environmental Protection Agency is further proof that provision was not meant to impair the primary jurisdiction of the Board. The reason for the ban on "duplicitous" complaints was the fear that allowing private complaints might flood the Board with too many cases raising the same issue and unduly harrass a respondent. The fear was not of one complaint before the Board but of many. The very purpose of permitting private complaints was to allow an alledged polluter to be brought before the Board. In this case there is no other pending complaint against this respondent before the Board. Moreover, the Attorney General's court suit does not allege a violation of the same statute or regulations; it is based upon his independent statutory authority to abate water pollution and it was instituted before the Act under which the present

> complaint was filed even was adopted. It is no answer that in a sense both complaints seek the same relief, namely, an order forbidding water pollution by the District. The state has several laws against pollution, and a complaint alleging violation of one of them does not preclude a complaint by another party alleging violation of another law.[34]

Chairman Currie's statement was the first definitive pronouncement in an official PCB opinion concerning PCB's legal powers. Another serious question regarding the constitutional authority of the Environmental Protection Act of 1970 was raised in PCB 70-18, EPA v. Container Stapler Corporation.[35] The respondents argued: 1) that PCB-18 was a hearing run by a single officer and therefore "...would deprive corporate respondents of due process of law on the grounds that the penalty provided under the Act is a criminal penalty requiring 'proof beyond a reasonable doubt'",[36] and 2) that the "...Act was so vague, uncertain and indefinite that corporate respondents would be unable to prepare their defense, and thereby be deprived of due process of law under the constitutions of the United States and the State of Illinois."[37]

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34 Ibid., pp. 35-36.

35 Similar questions were raised in PCB 70-38, EPA v. Modern Plating Corporation; PCB 70-39, EPA v. John T. Laforge Company Inc.; and PCB 71-51C, EPA v. City of Champaign, et.al. The case summaries are presented in Appendix IV, pp. 206, 207, and 213 respectively.

36 Opinions, Vol. 1., PCB 70-18, p. 269. See Appendix IV, pp. 205.

37 Ibid.

The Board addressed itself directly to these two arguments. First, the PCB argued that penalties provided under the Act were not criminal penalties unless the respondent was charged with a misdemeanor. Further, if a respondent was charged with a misdemeanor, the case would be prosecuted by the Attorney General's office before the appropriate state court. Regarding the specific case under consideration (PCB 70-18) the PCB argued:

> while the Act provides for misdemeanor prosecution, the present proceeding is not one. The instant case is a civil action calling for the entry of a cease and desist order and the imposition of penalties and does not constitute a criminal charge or require proof in excess of a preponderance of the evidence.[38]

Regarding allegation that the Act was "vague, uncertain and indefinite" the PCB noted that "...relevant provisions of the statute and the regulations under which the present proceeding was tried are set forth..." in the charges by the EPA. The Board took the position that there was no question that the regulation was specific, detailed, and understandable.[39] Many of the PCB opinions on constitutional authority were challenged through the Illinois District Appellate Courts. By the end of F.Y. 1972, however, no Appellate Court decisions had been rendered.

Once the question of constitutional authority had been dealt with in each of the above cases, the Board addressed a procedural question concerning

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38 Ibid., p. 270. See also Vol. 1, PCB 70-39, p. 548.

39 Ibid., p. 271. See also Vol. 1, PCB 70-39, p. 548.

the submission and withdrawal of complaints. A major argument against the enactment of the 1970 Act emphasized the ease with which citizen complaints could be filed to harass alleged violators of the Act.[40] The PCB acted quickly to discourage such harassing tactics. The League of Women Voters complaint against NSSD was joined on September 24, 1970 by Mrs. Loraine Facktor, Mr. and Mrs. Emanuel Winston and Mr. and Mrs. Paul Brown, representing the "Community to Save Highland Park". Highland Park is a community of the Chicago Metropolitan Area serviced by NSSD facilities. In the final day of six days of hearings, Mrs. Facktor, et. al. filed a motion to withdraw their complaint without giving any justification. Board member Richard Kissel denied the motion stating that:

> This tactic certainly tends to prove that Mrs. Facktor was not serious about her complaint in the first place, but rather she wished to harass the district by bringing yet another case against it. We cannot allow such action by a party. Those who bring cases before this Board should be prepared to prosecute their cases to a conclusion. The motion to dismiss of Mrs. Facktor is hereby denied.[41]

Following the question of procedure of filing complaints, the Board moved to establish the use of its enforcement instruments—revenue bonds, sewer bans, money penalties, and performance bonds.

Under the 1970 Act, the PCB may require the issuance of revenue bonds as general obligations of a sanitary district or a municipality. Monies

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40 See Appendix II, p. 179.

41 Opinions, Vol. 1, PCB 70-12, p. 386. See Appendix IV, p. 205.

obtained from the issuance of revenue bonds are used to improve or construct sewage treatment facilities. The Board's authority comes under Title 13, Section 46 of the Act:

> If funds on hand or unappropriated are insufficient for the purposes of this section, the necessary funds shall be raised by the issuance of either general obligation or revenue bonds. If the estimated cost of the steps necessary...to comply with such order is such that the bond issue,...,would not raise the total outstanding bonded indebtedness of such municipality or sanitary district in excess of the limit imposed upon such indebtedness by the Constitution of the State of Illinois, the necessary bonds may be issued as a direct obligation of such municipality or sanitary district...[42]

The North Shore Sanitary District challenged the Board's authority in this matter. They argued that the state statute creating sanitary districts, limited each district's bonding powers to 5% of the valuation of taxable property therein.[43] The NSSD noted that it was near this limit. In response, the Board argued that the statute creating the districts, also stated, that "...an administrative agency of the State of Illinois, having jurisdiction to issue orders to abate its discharge of sewage, can require the district to issue bonds in an amount required for the purpose, plus

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42 Illinois, Statutes (1970), Title 13, Sect. 46, p. 894. The statutory limit referred to in this quote was removed in the new Illinois State Constitution passed subsequent to the passage of the Environmental Protection Act of 1970.

43 Opinions, Vol. 1, PCB 70-7, pp. 381-382.

such reasonable future expansion as shall be approved."[44] To further their argument the Board noted that the 1970 Act superseded earlier statutes concerning sanitary districts. The PCB cited an amendment to the Sanitary District Act which stated:

> Nothing in this Act (the Sanitary District Act) may be construed as superseding or in any manner limiting the provisions of the 'Environmental Protection Act', enacted by the 76th General Assembly.[45]

The Board's order to issue revenue bonds was not contested in all cases, however. The Village of Glendale Heights, in attempting to meet their compliance schedule for state water quality standards, ordered a referendum in May, 1970. The voters of the village defeated the referendum, thereby blocking the village from an adequate source of financing for their sewage treatment needs. The village sought a directive from the PCB to allow them to move toward compliance.[46] The PCB ordered the "... issuance of general obligation or revenue bonds in the amounts necessary to complete its proposed sewage treatment plant expansion."[47]

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44 Ibid.

45 Ibid.

46 Opinions, Vol. 1, PCB 70-8, p. 218. See Appendix IV, pp. 204.

47 Ibid., p. 221

During the first two years of the Board's operations, the issuance of revenue bonds was required in seven cases.[48]

The most controversial of the Board's instruments used in enforcement proceedings is the sewer ban. As discussed earlier, a sewer ban prohibits the connection of additional municipal or industrial operations to existing sewage treatment facilities. Thus, the ultimate effect of a sewer ban is to halt the construction of new homes and commercial buildings. The PCB issued its first sewer ban against the NSSD. The PCB argued that:

> In the present case,...,such an order is imperative if we are to avoid the continuing threat of increased water pollution and serve the purposes of the Act. It would be anomalous indeed for this Board after holding that gross pollution is occuring, to issue an order that permitted the situation to get still worse.[49]

In attempting to weigh costs versus benefits the Board stated:

> We recognize that this ruling may cause considerable inconvenience for those who hope to build or to begin occupying new buildings in the district. It should be obvious that pollution control is never without its costs. Industrial firms are often required to spend millions of dollars for treatment facilities. Closing a polluting plant can put people out of work. But the people of Illinois have reaffirmed by their overwhelming approval of the $750,000,000 Anti-Pollution Bond Issue their conviction that considerable sacrifices must be made to restore our much-abused waters to a more acceptable state.

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48 See Opinions, Vol. 2, PCB 71-223, pp. 727-731; Vol. 3, PCB 71-384, pp. 709-716; and Vol. 4, PCB 72-8, pp. 181-185. For a summary of each see Appendix IV, pp. 222, 233, and 235 respectively.

49 Opinions, Vol. 1, PCB 70-7, p. 384.

> If some hardship is incurred because of today's order, it seems to us to be more than justified by the disadvantages of permitting increased pollution of the lake.[50]

As stated earlier, Sections 27 and 33 of the 1970 Act direct the Board to consider possible costs and benefits in reaching decisions and issuing orders. The implication of such a directive is that a given action is unjustifiable if its costs are greater than the benefits it generates. But, the Board does not have adequate tools and technical expertise for making such cost-benefit comparisons. This is not to say that the Board is not living up to its mandate. Rather, the state of the arts in measuring costs and benefits is lagging behind the rhetoric of the legislation.

In dealing with cost-benefit comparisons the problem is one of assessing value to the various variables involved in a Board action. Lawrence Hines discribes the problem of valuing actions as follows:

> Some project benefits and costs cannot be expressed as readily as others in monetary terms. Pollution-abatement benefits, for example, are at best incompletely accounted for in the market.....
> .....
> For the most part, environmental-protection programs are heavily loaded with aesthetic considerations and other so-called intangibles, benefits that are real important to society, but that are not automatically recorded in the market economy.[51]

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[50] Ibid., p. 385. See also PCB 70-8, PCB 71-8, and PCB 71-21.

[51] Lawrence Hines, Environmental Issues: Population, Pollution and Economics, (New York: W. W. Norton and Co., 1973) p. 117. See also, U.S. Congress, Joint Economic Committee, The Analysis and Evaluation of Public Expenditures: The PPB System, A Compendium of Papers Submitted to the Subcommittee on Economy in Government, 91st Cong., 1st sess., 1969, p. 1182-1183. and Richard A Musgrave and Peggy B. Musgrave, Public Finance in Theory and Practice, (New York: McGraw Hill Book Company, 1973) pp. 141-146.

Fundamental to making cost-benefit comparisons is the effect of the various pollutants on humans and the environment and the effectiveness of certain combatants on the pollutants themselves. Some information regarding these factors is available. For example, it is known that viral bacteria causing hepatitis comes from certain types of pollutants produced in sewers.[52] In 1972, bacteria was found flowing from one of the NSSD sewers into a public beach area along the shore of Lake Michigan. The Board, in deciding what action to take considered the cost to the NSSD of chlorinating the sewer flow versus the lost benefit to residents of closing the beach. The Board's opinion read:

> It must be remembered that when we speak of a bathing season we are not speaking of one "object" but of many days of recreational enjoyments for the residents of the District and Northeastern Illinois. The capital cost which the District presents, $350,000 for the chlorination facilities, is worth the price.[53]

Massive chlorination of the sewer flow, at a cost to the district residents of $350,000 was judged more beneficial than the possible cost of closing the beaches to the public. A dissenting opinion given by board member Jacob Dumelle emphasized the lack of specific knowledge concerning the effectiveness of a given chemical in combating pollution.[54]

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[52] Opinions, Vol. 3, PCB 71-343, p. 562.

[53] Ibid., p. 555.

[54] Ibid., p. 562

Mr. Dumelle felt that ozone was "far superior" to chlorine in killing viruses. He judged that since the Board proposed the use of chlorine instead of ozone, the beaches should not be opened for the season.[55] A review of the Board's decision in this case demonstrates a lack of "hard" data on which a comparison between costs and benefits could be made.

In the case of sewer bans, the question is now to compare the effects of endangered health of citizens from continued pollution to the loss of revenues generated by a declining construction industry. The problem is somewhat analogous to the traditional problem of comparing apples and oranges. Nevertheless, such a comparison was requested in the NSSD case.

About nine months after the original sewer ban order, the NSSD filed a petition with the Board for a variance from the sewer ban, claiming economic hardship. The central theme of their argument was that the sewer ban had halted the construction of any new buildings. In presenting its case, the NSSD noted that the First Federal Savings and Loan Association of Waukegan had "...ceased the issuance of all normal construction loan commitments, except where the Lake County Health Department had approved installation of a septic system." The Savings and Loan noted that their loans for the year were $1.8 million for the first quarter, $42,000 for the second quarter, and $41,000 and $58,000 for the third and fourth quarters, respectively.[56] A construction company executive also noted

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[55] Ibid.

[56] Ibid., p. 546.

that "...a majority of his employees were laid off due to a lack of new work brought about by the imposition of the sewer ban."[57] The Executive Secretary of the Waukegan-North Chicago Chamber of Commerce testified that "...virtually no new construction was underway within the district."[58] The NSSD requested a variance that would allow for 1,000 connections to be granted in 1972, 2,000 in 1973, and 2,000 in 1974. On January 31, 1972 the Board granted the district a variance from the sewer ban for 1,000 connections. On February 10, 1972, the NSSD filed a Petition for Reconsideration and Rehearing requesting modification of the January 31 order. After considering arguments, the Board issued a new order on March 2, 1972 allowing for a variance of an additional 4,000 connections to the sewer ban for a total of 5,000.[59] The controversy over the NSSD sewer ban made the PCB keenly aware of the overall economic and political impact of its decisions. It is unclear at this point how the Board compared the social costs and benefits in the current case to issue a variance to the original sewer ban. It seems that the financial interests from the District such as developers and savings and loan officials overwhelmed the Board. The theory discussed in Chapter I, where the welfare gain of a given action was compared with the costs of the action, assumes an ability, on behalf of the administering agency, to quantify relevant variables. As is obvious at this point, in trying to apply such abstractions to a real world situation problems develop. Realizing such problems,

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[57] Ibid.

[58] Ibid.

[59] Ibid., p. 702.

Robert Levine, in a paper submitted to the Joint Economic Committee of the U.S. Congress, states:

> It should be emphasized that the cost-benefit framework is more important as a style of thinking than as a rigid mode of analysis. The data now available are seldom of a quality sufficient to support cost-benefit analysis which is both rigorous and relevant to decision problems,...[60]

What is needed, then, is a framework for examination of possible effects of Board actions.

In addition to the sewer ban, the PCB frequently uses money penalties as a water pollution abatement tool. The largest money penalty was assessed in PCB 71-11, GAF Corporation v. EPA, April 19, 1971. The Corporation petitioned the PCB for a variance in meeting compliance dates for construction of its sewage treatment facility. The PCB argued that the Corporation had been "incredibly dilatory" in meeting the required deadlines.[61] The PCB assessed a money penalty in the sum of $10,000 per day for each day from December 1, 1970 to the date of the order. The total penalty amounted to $149,000.[62] In the same order, the PCB required the company to issue a performance bond of $2.6 million. Throughout the first two years of PCB hearings, this was the largest use of the money penalties and performance bonds. Although not evident at first, a rather

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[60]Robert Levine, "Policy Analysis and Economic Opportunity Programs", in U.S. Congress, Joint Economic Committee, The Analysis and Evaluation of Public Expenditures: The PPB System, (Washington, D.C.: U.S. Government Printing Office, 1969) p. 1183.

[61]Opinions, Vol 1, PCB 71-11, p. 495.

[62]Ibid., p. 492.

serious point was raised at this time. Variance petitions are submitted to the Board, not as a confession of guilt but generally as an "act of good faith" in attempting to comply with the law. If this is the case, treating variance petitioners as violators discourages the filing of such petitions.

The problem presents itself in situations like the GAF case where the respondent had been in violation of the Act for some time. GAF officials, realizing the seriousness of the PCB actions in abating pollution, began to comply with the law. Understanding further that compliance deadlines set by the Board could not be met, the respondent filed for a variance from those dates and submitted a proposed compliance schedule. Reviewing this case the question stands, then: If a party applies for a variance to the Board's Rules and Regulations, should he be penalized as if he had been brought before the Board as a violator?

The Board took a position similar to that of the GAF case in PCB 71-19, Spartan Printing Company v. EPA. Spartan Printing Company applied for a variance in meeting deadlines for construction of "certain waste treatment facilities." The PCB argued that the company had "...taken too much time in figuring out what it should do about the problem with its wastes."[64]

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[63]Based on a personal interview with Mr. Richard Nelle, in Springfield, Illinois, August 11, 1973.

[64]Opinions, Vol. 2, PCB 71-19, p. 25. As noted earlier, the problem Spartan faced concerned a general lack of knowledge of how certain types of ink can be treated in such a way as to meet the state's water quality standards.

Spartan was ordered to pay $10,000 in money penalties and file a performance bond with the Agency in the amount of $200,000.

The use of money penalties was not restricted to private corporations. For example, in PCB 71-26 EPA v. City of East St. Louis, the PCB found the city guilty of polluting the Mississippi River. The PCB assessed a money penalty of $200. The EPA had originally sought a penalty of $6,000. The PCB attempting to consider economic factors lowered the amount on a hardship basis. The Board justified its actions saying:

> East St. Louis is a poverty-stricken city, struggling with staggering financial burdens; it has a brand-new city administration that has pledged itself to a sincere effort at abating pollution. We think in light of these facts the penalty should be set at a nominal $200 to leave the city needed funds to correct the pollution problems.[65]

Other municipalities and public organizations charged money penalties or ordered to post performance bonds included the City of Marion ($100 penalty and $100,000 bond), the City of Mattoon, ($10,000 bond), and Williamson County Housing Authority ($5,000 penalty). The attitude of the Agency and the Board in using these tools has been somewhat flexible. For example in EPA v. Village of Glendale Heights, PCB 70-8, the Agency initially requested a penalty of $10,000. On the date of the hearing the EPA withdrew its request on the basis that the village had confessed its liability. The total amount of money penalties and performance bonds levied for F.Y.

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65 Ibid., Vol. 2, PCB 71-26, p. 80. See Appendix IV, p. 212.

1971 and F.Y. 1972 are presented in Table 27 below.

TABLE 27

MONEY PENALTIES CHARGED AND PERFORMANCE BONDS REQUIRED BY THE PCB, IN WATER POLLUTION CASES BY FISCAL YEAR, 1971-1972

Fiscal Year	Money Penalties	Performance Bonds
1971	$ 161,700	$ 3,540,000
1972	40,100	635,000

Source: Compiled from the Illinois Pollution Control Board Opinions, Volumes I through IV, (Chicago, Illinois: Illinois Pollution Control Board).

By the end of F.Y. 1972, the EPA and the PCB had established the use of all major regulatory instruments provided by the Environmental Protection Act of 1970. The two agencies had begun to develop a "reputation" and "image" different from that of the previous agencies of the state that dealt with water pollution control. A summary of these differences and their possible consequences are presented in Chapter VI.

CHAPTER VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This study was an investigation of the changes that have occurred in the legal and organizational structure of Illinois' water pollution abatement and control program. Specific emphasis was placed on the changes that have occurred since the passage of the Federal Water Quality Act of 1965 and a comparison between the Environmental Protection Agency and the Sanitary Water Board. The conclusions resulting from the study are given later in this Chapter.

The study began with a review of the literature from various disciplines on the subject of pollution control. The various policy xx recommendations found in the literature generally centered around the use of such tools as pollution charges, taxes, licensing fees, and investment credit incentives. A few of the writers cited from the literature discuss the need for a total restructuring of the various state' regulatory framework to make pollution control more effective. However, only Elizabeth Haskell notes a specific need to create a single agency approach in dealing with water pollution. This study is an addition to the literature dealing with agency structure as it pertains to water pollution regulation efforts.

Federal Water Quality Act of 1965

The Federal Water Quality Act of 1965 was passed to encourage states to upgrade their water pollution control operations. It also served to strengthen the foundation on which such operations were based -- water quality standards. Requiring states to develop new water quality standards, produced additional changes in operating procedures. First, in order to develop new standards, states were forced to reevaluate their existing surveillance techniques and guidelines. Since the 1965 Act required standards not only to be set but maintained, each state had to reexamine its existing methods of determining the presence of water pollution. This forced the states to review the various engineering techniques available for measuring the precise quantity of water pollutants. For example, some of the early minimum levels of the water quality standards set by the State of Illinois were dictated by the limited technical knowledge available at that time for detecting and measuring pollutants. As a result pollutant measurement techniques for analysis of water samples had to be reviewed. Second, the Act prompted a detailed inventory of sewage treatment operations within a given state. An integral part of the water quality standards required under the 1965 Act was the development of an implementation plan. The implementation plan was to state specifically how and by when the states' water quality standards were to be met. This requirement led to a review of current sewage treatment facilities in terms of: 1) the demand on a given plant versus the capacity of the plant, 2) the type of sewer system involved; a sanitary sewer

or a combined sewer,[1] and 3) the type of treatment operation, primary, secondary, or tertiary. The general effect of the 1965 Act, then, was to cause each state to undergo a critical evaluation of itself as regards water pollution abatement and control programs.

Illinois' initial response to the 1965 Federal Act came in 1967 in the form of an amendment to the 1951 SWB Act. The amendment granted the Sanitary Water Board authority over the sanitary districts of the state with a population of one million or more in such matters as water quality standards enforcement and federal grants. (Prior to this amendment, all districts with a population exceeding one million--Chicago Metropolitan Area--were exempt from the authority of the Sanitary Water Board Act.) The amendment was passed in response to the 1965 Federal Act's requirement that there be only one representative of the state dealing with water pollution control concerns, if federal monies were to be dispensed to that state.

The second response to the 1965 Act was the holding of hearings for the development of water quality criteria, water quality standards, and appropriate implementation plans. By January of 1968, federal requirements had been met and published as Sanitary Water Board Rules and Regulations

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[1]A sanitary sewer is one that treats sewage from normal household, commercial, and industrial operations. A storm sewer is one that carries runoff from storms and wastes disposed of via gutter and other drainage systems. A combined sewer is one that takes and treats the wastes of the sanitary and the storm sewer combined. Because of the "open-ended" nature of the combined sewer, i.e., the tremendous variety of possible pollutants that can come through a storm sewer, it is almost impossible to effectively treat the wastes of a combined sewer system.

SWB-7 through SWB-15. These water quality standards remained in force until March of 1972 when the Pollution Control Board began to adopt new standards.

From 1968 through June 30, 1970, the SWB concerned itself with the general surveillance and enforcement efforts necessary to meet water quality standards and implementation schedules. At the end of F.Y. 1970, when the SWB was replaced with the PCB-EPA, an estimated 82.8 percent of Illinois' population was served by some type of sewer. Of that 82.8 percent, 99.8 percent were tributary to sewage treatment plants. As of June 1970, the Federal Water Quality Administration noted that only 68 percent of the U.S. population was served by sewers. Of that 68 percent, only 86 percent were served by sewage treatment plants. The many years of SWB efforts placed Illinois well above the U.S. in terms of sewage treatment plants and sewer construction. In July of 1970, the Environmental Protection Act of 1970 became effective and the SWB was disband.

The new legislation placed primary reliance in dealing with water pollution in the hands of the Environmental Protection Agency and the Pollution Control Board. The EPA has within its organization the Division of Water Pollution Control. The primary functions of the DWPC consist of: 1) reviewing construction plans for new and improved treatment facilities, 2) issuing permits when the construction plans meet EPA standards, 3) measuring the performance of the state's water quality program, 4)

developing enforcement actions to be taken against violators or potential violators of the Act, 5) certifying sewage treatment plant operators, and 6) certifying various pollution control devices for exemption from property taxes. If enforcement actions are warranted from findings based on investigations by the DWPC, it is the duty of DWPC lawyers to develop the pertinent facts. Once done, the case is presented before the Pollution Control Board by a member of the State Attorney General's staff.

In its first year of operation the EPA employed a staff of lawyers that represented the citizens of Illinois in various actions before the PCB. Subsequently, the state's Attorney General asserted himself as the chief litigator of pollution actions. The EPA legal staff was then reorganized. EPA lawyers began to function only as technical assistants in developing charges against violators to be heard before the PCB.

In judging violators the PCB has authority to: 1) levy money penalties where appropriate, 2) issue variances (temporary exemptions from the various sections of the Act and the Board's Rules and Regulations), 3) issue cease and desist orders, 4) order the sale of revenue bonds to provide for the financing of construction projects on behalf of the various sanitary districts and municipalities, and 5) require the posting of performance bonds in amounts appropriate to the needs of the respondent in the hearing. There is a provision for appealing decisions of the Pollution Control Board through the State Appellate Court. Again, the Attorney General's office acts as the chief representative for the EPA. In addition to the function of the Board in judging cases, it also has the authority to hold hearings to determine: 1) water quality standards, 2) rules for filing complaints

for actions before the Board, and 3) the possible social and economic effects of Board actions such as sewer bans.

To carry out the various pollution control functions of the various state agencies, the state allocates monies from the general revenue fund. In addition to the state's funding efforts, the Federal Government provides matching funds for specific programs. The funds from both sources increased from $344,326 in Fiscal Year 1960 to $2,892,426 in Fiscal Year 1972. The corresponding increase in expenditures per capita is from roughly 3 1/2 cents in F.Y. 1960 to about a 25 cents in F.Y. 1972. This picture changes somewhat in F.Y. 1972 if the funds released under the state's Anti-Pollution Bond Act of 1970 are included. This addition raise the total expenditure figure to $83,279,177 and the per capita figure to about $7.22. Without considering the Anti-Pollution Bond Act expenditures, the increase in per capita expenditures proves to be about eight fold. The significant aspect of this increase is the time frame in which the expenditures changed. From F.Y. 1960 through F.Y. 1966, before the 1965 federal act had any impact, the per capita expenditures increased at a rate of less than 1/2 of 1 cent each year. Following the enactment of the Federal Water Quality Act of 1965, the increase amounted to over 3 1/2 cents each year. The increases in funding were matched, over the same period of time, by increases in the staff of the various state agencies. The state's manpower commitment rose from 20.79 F.T.E.'s in F.Y. 1960 to 202.18 F.T.E.'s in F.Y. 1972. Manpower and dollar commitments after 1965 indicate a considerable effort on behalf of the state to combat water pollution.

The Environmental Protection Agency-Pollution Control Board and the Sanitary Water Board

A portion of this study compares the water pollution activities of the current EPA and PCB with the activities of the old Sanitary Water Board. This comparison centers on two distinct questions. First, is the EPA-PCB more effective in combating water pollution than its predecessor, the SWB? Second, if the EPA is more effective, can the increased effectiveness be accounted for by the differences in organizational arrangements between the SWB and the EPA-PCB; that is from a relatively decentralized agency to a more centralized agency approach?

It is not difficult to judge the effectiveness of one agency's operations over the other regarding a given end, if only quantitative aspects of various concerns are considered. For example, striking increases in agency activity in the EPA-PCB over the SWB have occurred in the areas of permit issuance, stream effluent samples taken, treatment plant inspection visits, the number of administrative enforcement orders issued and the number and amounts of money penalties assessed. Using only these criteria to judge, it is possible to state that the EPA-PCB is operating to combat water pollution more effectively than did the SWB. But this statement does not provide us with conclusive evidence regarding the effectiveness of the more centralized EPA-PCB approach over the somewhat decentralized SWB approach. Such a judgement should consider qualitative factors as well as gross "quantitative" aspects. Possible qualitative considerations are: 1) the part-time nature of the SWB as compared to the full-time PCB, 2) funding changes from the period wherein the SWB was active as compared to the more

current EPA experience, 3) the nature and use of the various regulatory instruments available to each arrangement, 4) the nature of the staff personnel provided the SWB and the EPA-PCB, and 5) the climate of opinion prevailing at a given time concerning pollution. These considerations are subsequently discussed in the order presented above.

As noted, the Sanitary Water Board was staffed with part-time members. Four of the six members of the Sanitary Water Board were directors of departments within the state. The amount of time these men could afford for Board activities was limited. The Pollution Control Board is manned by five full-time individuals. Some PCB members are lawyers and others have technical engineer-oriented training. Each of the current Board's members has specific training in at least one of the various areas directly related to pollution abatement and control. Further, they are full-time employees and have no additional outside responsibilities. Also, staff membership of the SWB always included one representative from industry and one from a municipal government. The SWB Act specifically authorized such members. These men, in a sense, acted as a liaison between the interests of industry, municipalities, and the SWB. The membership of the PCB does not include representatives from either industry or municipal governments directly. This change in the composition of the regulatory board is not viewed as any sort of loss, however. Since the PCB is an administrative tribunal and has authority to take punitive actions in cases of violations of the 1970 Act, the absence of direct ties with industry and municipal interests assures, to a certain degree, a lack of bias in Board decisions. This is not to say that the SWB's effectiveness was limited because of the presence of the

two interests on their board. The SWB was not a tribunal. Punitive actions were taken through the circuit courts by the Attorney General's office.

Financial support is another factor to consider when making comparisons between the two agency arrangements. Financial support for the EPA-PCB greatly exceeded that afforded the SWB. The increased financing for the EPA-PCB came from three sources. First, $80.3 million was released under the Anti-Pollution Bond Act of 1970 in F.Y. 1972; second, an increase of $1.04 million in F.Y. 1971 and $0.97 million in F.Y. 1972 were spent from the state general revenue fund by the EPA and PCB; and third, an addded $6.7 thousand in F.Y. 1971 and $98.8 thousand in F.Y. 1972 were furnished by federal fund sources. During the first two years, EPA-PCB expenditures, furnished from state and federal sources, increased in total over those afforded the SWB by $82.4 million. The forthcoming conclusion is that the state intensified its financial commitment to combating water pollution. If the EPA-PCB centralized arrangement seems more effective in carrying out its mandate than did the SWB decentralized arrangement, the judgement must be tempered by the large increase in funding afforded the EPA.

Punitive controls and regulatory tools used in enforcement actions are also very important considerations when making comparisons between the two agencies. Under the SWB Act, violators when prosecuted were taken through the state circuit court system. Circuit courts tended to administer the law very slowly. The circuit court dockets are generally full and cases are not adjudicated within what might be considered a reasonable amount of time. Under the new arrangements of the EPA-PCB, violators are prose-

cuted directly by the PCB. The 1970 Act requires that the Board issue an opinion or order within 90 days of filing of a complaint or petition for specific actions. Once issued, Board decisions can then be appealed through the Illinois Appellate Court system.

In addition to the above considerations, the nature of the staff personnel under both arrangements should be viewed. Under the SWB, Bureau of Stream Pollution personnel were expected to perform or be capable of performing all functions related to water pollution control. For the most part, each of the Bureau's technical personnel was responsible for construction plan evaluations, permit issuances, treatment plant inspections, and various other surveillance activities. The personnel of the EPA's Division of Water Pollution Control, on the other hand, are more specialized. Under the Division's various sections the personnel are versed in specific tasks. For example, under the Performance Measurement Section there are personnel who deal only with stream and lake samples; under the Permit Section there are personnel whose primary function is the review of construction plans; and under the Grant and Tax Certification Section, there are personnel who deal specifically with the certification of pollution control equipment for the purpose of exempting such from the property tax roles. The SWB personnel, then, were expected to be generalists while the EPA is oriented more toward hiring or training its personnel to be specialists. Logically this specialization among staff members should lead the EPA to a greater level of output efficiency. This grants the EPA a considerable advantage over the SWB.

A final consideration often overlooked in such comparative studies

is the "climate of opinion".[2] The climate of opinion is what one might call the prevailing thoughts as to how to accomplish a given end. For example, given prevailaing views on the waging of war, it is easy for the liberal youth of today to condemn President Truman's decision to use atomic weapons against the Japanese in 1945. If, in the name of argumentative fairness, one considers the prevailing thoughts of the political leaders of the country in the 1940's such a condemnation might not be forthcoming. The climate of opinion as to how best to abate and control water pollution is obviously different under the current agency arrangements than was the case under the SWB setup. As noted in Chapter V, Mr. Klassen, speaking for the SWB, noted a strong reluctance to prosecute cases and levy money penalties. The general opinion of the SWB as regards water pollution control and abatement was directed to engineer-oriented, health concerns; that is the construction of sewage and waste treatment facilities. Under the EPA-PCB structure, considerable emphasis has been placed on the use of punitive action during the first two years. It can easily be said that the climate of opinion prevailing under the SWB and the EPA-PCB is substantially different.

Overall, it can easily be said that the EPA is in a position to move more effectively and rapidly to solving the pollution problems of the State of

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2 For a lengthy discussion of the idea of climate of opinion see Carl L. Becker, The Heavenly City of the Eighteenth-Century Philosophers, (New Haven: Yale University Press, 1972) pp. 1-32.

Illinois. It is not evident, however, how much of this new effectiveness is due to increased money and manpower and how much is due to a change in the administrative arrangements of the pollution control efforts. Without making several unrealistic assumptions regarding such factors as climate of opinion, a sound judgement regarding the efficiency of one administrative arrangement (centralized) over the other (decentralized) is not possible. Given the current EPA-PCB structure, some conclusions are warranted from this study.

Conclusions

Conclusions are drawn from the study in the following areas: 1) survey of the literature, 2) budgeting procedures, 3) issuance of variances in abatement cases, 4) cost-benefit analysis, and 5) directorship of the EPA's Division of Water Pollution Control.

Nine of the ten economists surveyed in the literature tend to eschew the use of a regulatory agency to control water pollution. For example, shortcomings of regulatory agencies given by economist Richard Zerbe, who is considered representative of most economists, are: 1) the agencies prove cumbersome and inefficient in administering the laws, rules, and regulations, and 2) the agencies tend to lose sight of their original objectives. These two objections do not seem to be particularly relevant in the current study. Based on the Board opinions reviewed in this study for the first two years of the PCB's existence, the Pollution Control Board tends to move swiftly in carrying out its enforcement role. Turn around time on decisions and opinions in variance and violation cases is within the 90 days required by the 1970 Act. In addition, when rendering its opinions the Board is

quite explicit in stating what it expects of the respondents in the various pollution abatement cases. Also, as long as the EPA and the PCB operate somewhat independent of each other (one agency prepares charges and the other agency rules on them) there is little chance that the Board will lose sight of its purpose. There are, however, some economists who recognize that a regulatory agency has a tendency to become somewhat "industry minded" in making its decisions. The term industry mindedness refers to an overall sympathetic attitude towards industry that develops over time. The affects of such an attitude could lead the agency to render lenient decisions in enforcement actions against industry.

One means of making this industry mindedness less likely to occur with the PCB would be to legislate the philosophical prerequisites expected of a person that is to serve on the agency's board. An example of this technique is found in a U.S. Senate Bill offered by Senator Adali Stephenson to create a federal oil and gas corporation.[3] The Bill designates requirements for the oil and gas corporation's board members as follows:

> All members of the Board shall be individuals who believe and profess a belief in the feasibility and wisdom of this Act, and who believe and profess a demonstrable belief in the environmental protection and the purpose of the anti-trust and consumer protection laws of the United States.[4]

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3 S. 2506, 93d Cong., 1st Sess. (1973).

4 Ibid., Sect. 34 (2), 3.

It is further stated in the Bill that "Each Board member shall refrain from any action which may actually or apparently impugn his stated belief in the purposes of this Act."[5] To assure the continued effectiveness of the EPA-PCB in abating pollution, it is recommended that the Illinois Legislature move to effect such an amendment to the Environmental Protection Act of 1970.

The primary policy tool for abating pollution recommended by most economists is the pollution tax or charge. Because the PCB has tended to be somewhat arbitrary in assessing money penalties in pollution abatement cases, pollution charges could be of considerable use in Illinois. The pollution charges could be used as a means to discourage pollution and encourage the construction of sewage treatment facilities in lieu of money penalties. (In cases of flagrant violations of the 1970 Act, however, money penalties should continue to be used.) An example of the arbitrary use of money penalties is disclosed when the GAF Corporation decision (PCB 71-11) is compared with the Spartan Corporation decision (PCB 71-19). GAF Corporation was fined $149,000 for behavior described by the Board as "incredibly dilatory", while the Spartan Corporation, having a similar history of noncompliance with the Board's water quality standards, was fined only $10,000. To a large extent, this arbitrary assessment of money charges for polluting the state's waterways could be made more uniform and less dis-

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[5] Ibid., Sect. 34 (7), 5.

cretionary by implementing some sort of pollution charges. Money charges could be assessed and charged on a unit of pollutant basis and collected on a continuous basis. The amount of money to be charged and the pollutional base on which the charges are to be levied are technical questions to be solved through engineer studies and are beyond the scope of the current study.

As noted in Appendix II, the original draft of the 1970 Act included a clause authorizing the use of pollution charges. The charges were to be used in controlling water and air pollution. In both cases, however, the idea was compromised in the political process. (The reader is directed to pages 183 through 193 for a review of the effects of the political process on the passage of the 1970 Act.) It is recommended that the Illinois Legislature amend the 1970 Act to include the original clauses authorizing the use of pollution charges as a means of abating pollution. As a political enticement to pass such an amendment it could be argued that the revenues collected from the pollution charges be used to finance PCB or EPA activities. Inasmuch as the charges would be a new source of revenue for the state, a portion of the funds normally appropriated for the PCB and EPA from the state's general revenue fund could be diverted to other state priorities.

In Chapter III it was noted that the EPA develops its budget on a line-item basis. This causes the financial accounting of the EPA to conform to traditional classifications of general expenditure categories such as personnel services, materials, contractual services, and travel expenses. Such categories are possibly acceptable for the legislature for

appropriations purposes. This line-item method of classifying expenditures precludes, however, any accurate evaluation of a particular pollution abatement activity; especially when the activity is carried on by several different sections. For example, water pollution surveillance activities are engaged in by three different sections--Surveillance, Performance Measurement, and Enforcement Services. Subsequently the line-item method does not allow for evaluating the performance of individual sections in meeting their stated objectives. Line-item accounting is appropriate to an agency for evaluating internal administrative questions. If, however, the program budget method were developed and used, the agency would be in a much better position to begin evaluating the effectiveness of its various on-going programs such as water pollution surveillance.

There are differences in the methods for preparing the line-item budgets versus program budgets. The program budget involves and expenditure classification system based on output categories while the line-item budget emphasizes input categories. The execution of an effective program budget requires a staff of budget personnel able to issolate and identify the components of a given objective. If, for example, the agency moves to develop a program budget for the DWPC, some of the factors to consider in evaluating the surveillance program are as follows:

1. Number of citizen complaints filed
2. Number of DWPC personnel complaints filed
3. Number of hours spent in surveillance activities
4. Number of visits to treatment plants
5. Number of effluent samples taken
6. Number of manhours expended preparing cases
7. Average manhours expended preparing cases
8. Number of cases judged in favor of EPA
9. Change in technical indicators of pollution

This list is by no means exhaustive. It does, however, indicate the types of data to be gathered and compiled for adequate program evaluation. Once these data are compiled, they should be converted to "per dollars expended on surveillance" terms. Information such as the change in pollutional content of the waters per dollar expended will begin to give the DWPC some indication of the cost effectiveness of their surveillance program.

To aid the DWPC in setting up such a budget, an internal reorganization of the division seems necessary. As already noted, within the division the output of some sections is directly related to the output of others; that is some sections of the division are integrally involved with the duties of other sections. For example, the DWPC surveillance program involves the combined efforts of the Surveillance Section, the Enforcement Services Section, and the Performance Measurement Section. The objectives of these three sections as regards general surveillance activities transcend ordinary organizational lines. Line-item budgeting procedures, however, do not reflect this interdependence. These three sections should be merged into one. Such a merger should allow the DWPC a more integrated picture of the efforts of those who go into the field, visit treatment plants, take stream and effluent samples, and those who compile cases against alleged violators. It is recommended that the EPA move to reorganize these three sections within the DWPC and act to implement a program budget.

As regards the issuance of variances, the Pollution Control Board has acted rather strongly and negatively in some cases where corporation respondents filed a request for a variance. A variance request is

generally made by parties acting to meet the state's deadlines for various pollution abatement requirements. In some cases, however, the PCB seems to have accepted the variance requests as an admission of guilt. In these instances, several penalties and requirements have been assessed against the respondents. Examples of this harsh action taken by the Board are found in Chapter V in cases such as GAF Corporation v. EPA (PCB 71-11), Spartan Printing Company v. EPA (PCB 71-19), and Malibu Village Land Trust v. EPA (PCB 70-45). (See Appendix IV for a summary for each of these PCB opinions.) If the Board continues to respond to variance requests with severe money penalties, requirements of large performance bonds, and strict performance schedules, it seems that most potential variance requests will be discouraged. If the corporations do not file variance requests, the EPA has to identify them through the surveillance efforts as they are involved in pollution violations. With harsh PCB action in these variance petition cases there is no encouragement for the respondents to file for a variance to allow them to upgrade their treatment facilities. This seems so particularly if seeking a variance leads to a penalty just as severe as that received by those indicated in violation charge. The implication of this type of Board thinking, that is, penalize the respondents when they file a variance, is not consistent with the idea of pollution abatement. It encourages violation of the law as long as possible or until the violator is caught. It is recommended that the PCB make it known that less severe penalties (less severe than those given alleged violators) will be issued to potential violators who file for a variance. One

alternative might be simply to threaten harsh action in the event that performance is not obtained in a reasonable time and follow through in the event that the agreement is violated.

A caveat is offered at this point. If the Board begins to remove punitive judgements from variance cases all together, the Board runs the risk again of encouraging violations. If a potential violator realizes that under variance requests the Board does not take punitive action, he might continue the transgression of Board rules and regulations until he feels threatened by EPA surveillance efforts. After realizing this latter threat, the violator could then file for a variance from the Board and be above penalty.

Another cause for concern developed in the study is the use, or lack of use, of cost-benefit comparisons by the PCB in developing the opinions issued in Board hearings. The discussion presented in Chapter V notes that throughout the hearings on violations and variance petitions, the Board used the words "cost" and "benefit" to justify its position. The Board presented little hard information, however, in determining the actual costs or benefits of its various paths of action.

PCB judgements of the first two years seem to have been made more on the basis of intuition than on sound data as regards costs and benefits. For example, in variance hearings the Board made judgements that, <u>in its opinion</u>, the costs of allowing continued pollution outweighed the benefits gained from such a continuance. Using the issues that developed in the NSSD sewer ban, one can see that the economic side effects of the ban were not considered in making the decision to issue the ban. (See Chapter V,

pp. 129-130.) The recommendation of this study is to strengthen the base for such decisions. The Board should hold hearings on each of the various punitive tools available to gather information on their possible side effects. Also, increased knowledge of the effects of various pollutants on humans and the environment are needed. Cost-benefit comparisons can be made better by reviewing first order externality measures such as bacteria count in a given body of water in relation to the use of the water, and BOD and thermal heat levels needed to maintain the ecological balance of fish and aquatic life; and also by reviewing second order matters such as the change in the number of reported cases of such diseases as hepatitus, and the estimated loss of business possible due to shut downs and sewer bans. Third order externalities such as possible increases in crime and vandalism in areas where public beaches are closed should also be worked into the decisions where feasible. It is important that the Board move to develop more concise measures of costs and benefits. Most important, however, is the continuation of the cost-benefit framework as a "style of thinking."

The final recommendation of this study is that the EPA as quickly as possible to hire a full-time head of the Division of Water Pollution Control. To continue to allow the Division to be run by a person with tremendous administrative involvement in running the entire EPA is essentially making only a partial effort at strengthening the state's water pollution control program. The operations of the division with 165 personnel should not be shared with responsibilities for managing the entire EPA. The cost of continuing this divided control is lessening the management efficiency of both the division and the agency.

All in all the state has made a tremendous effort to combate problems of water pollution. The creation of the EPA and the PCB in 1970 has led to the development of a strong water pollution abatement and control program. As regards the time involved in punitive actions the PCB is a definite improvement over previous arrangements. By being required to issue opinions within 90 days of the filing of a complaint or request for hearing, the PCB has made the administration of the EPA statute more rapid, With the increased staffing and financial commitment by the state, the EPA and the PCB are able to increase their activities in critical areas such as research and program development. The creation of the EPA-PCB structure seems to be a forward step in dealing with the problems of abating and controlling water pollution.

APPENDIX I

A large portion of the current study is dependent on state activities authorized by the Environmental Protection Act of 1970. The Act is herein reproduced for the convenience of readers interested in more detailed inspection. Specific attentin is drawn to those sections of the Act that deal directly with or relate to water pollution abatement and control. These relevant sections are 4 through 7, 11 through 13, and 26 through 50.

THE ENVIRONMENTAL PROTECTION ACT
(H.B. 3788)

Approved June 29, 1970 - Effective July 1, 1970

AN ACT to protect the environment of the State and to repeal certain Acts therein named.

Be it enacted by the People of the State of Illinois, represented in the General Assembly:

TITLE I: GENERAL PROVISIONS

SECTION 1.
This Act shall be known and may be cited as the "ENVIRONMENTAL PROTECTION ACT".

SECTION 2 (a).
The General Assembly finds:

(i) that environmental damage seriously endangers the public health and welfare, as more specifically described in later sections of this Act;

(ii) that because environmental damage does not respect political boundaries, it is necessary to establish a unified state-wide program for environmental protection and to cooperate fully with other States and with the United States in protecting the environment;

(iii) that air, water, and other resource pollution, public water supply, solid waste disposal, noise, and other environmental problems are closely interrelated and must be dealt with as a unified whole in order to safeguard the environment;

(iv) that it is the obligation of the State Government to manage its own activities so as to minimize environmental damage; to encourage and assist local governments to adopt and implement environmental-protection programs consistent with this Act; to promote the development of technology for environmental protection and conservation of natural resources; and in appropriate cases to afford financial assistance in preventing environmental damage; and

(v) that in order to alleviate the burden on enforcement agencies, to assure that all interests are given a full hearing, and to increase public participation in the task of protecting the environment, private as well as governmental remedies must be provided.

(b) It is the purpose of this Act, as more specifically described in later sections, to establish a unified, state-wide program supplemented by private remedies, to restore, protect and enhance the quality of the environment, and to assure that adverse effects upon the environment are fully considered and borne by those who cause them.

SECTION 3 (a). *"AGENCY"* is the Environmental Protection Agency established by this Act.

(b) *"AIR POLLUTION"* is the presence in the atmosphere of one or more contaminants in sufficient quantities and of such characteristics and duration as to be injurious to human, plant, or animal life, to health, or to property, or to unreasonably interfere with the enjoyment of life or property.

(c) *"BOARD"* is the Pollution Control Board established by this Act.

(d) *"CONTAMINANT"* is any solid, liquid, or gaseous matter, any odor, or any form of energy, from whatever source.

(e) *"GARBAGE"* is waste resulting from the handling, processing, preparation, cooking, and consumption of food, and wastes from the handling, processing, storage, and sale of produce.

(f) *"INSTITUTE"* is the Illinois Institute for Environmental Quality established by this Act.

(g) *"OPEN BURNING"* is the combustion of any matter in the open or in an open dump.

(h) *"OPEN DUMPING"* means the consolidation of refuse from one or more sources at a central disposal site that does not fulfill the requirements of a sanitary landfill.

(i) *"PERSON"* is any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, estate, political subdivision, state agency, or any other legal entity, or their legal representative, agent or assigns.

(j) *"PUBLIC WATER SUPPLY"* means all mains, pipes and structures through which water is obtained and distributed to the public, including wells and well structures, intakes and cribs, pumping stations, treatment plants, reservoirs, storage tanks and appurtenances, collectively or severally, actually used or intended for use for the purpose of furnishing water for drinking or general domestic use in incorporated municipalities; or unincorporated communities where 10 or more separate lots or properties are being served or intended to be served; State-owned parks and memorials; and State-owned educational, charitable, or penal institutions.

(k) *"REFUSE"* is any garbage or other discarded solid materials.

(l) *"SANITARY LANDFILL"* means the disposal of refuse on land without creating nuisances or hazards to public health or safety, by confining the refuse to the smallest practical volume and covering it with a layer of earth at the conclusion of each day's operation, or at such more frequent intervals as may be necessary.

(m) *"SEWAGE WORKS"* means individually or collectively those constructions or devices used for collecting, pumping, treating, and disposing of sewage, industrial waste or other wastes or for the recovery of by-products from such wastes.

(n) *"WATER POLLUTION"* is such alteration of the physical, thermal, chemical, biological or radioactive properties of any waters of the State, or such discharge of any contaminant into any waters of the State, as will or is likely to create a nuisance or render such waters harmful or detrimental or injurious to public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate uses, or to livestock, wild animals, birds, fish, or other aquatic life.

(o) *"WATERS"* means all accumulations of water, surface and underground, natural, and artificial, public and private, or parts thereof, which are wholly or partially within, flow through, or border upon this State.

(p) "*MUNICIPALITY*" means any city, village or incorporated town.

SECTION 4 (a).
There is established in the Executive Branch of the State Government an agency to be known as the Environmental Protection Agency. This agency shall be under the supervision and direction of a Director who shall be appointed by the Governor with the advice and consent of the Senate. The term of office of the Director shall expire on the third Monday of January in odd numbered years provided that he shall hold his office until his successor is appointed and qualified. The Director shall receive an annual salary of $35,000. The Director, in accord with the Personnel Code, shall employ and direct such personnel, and shall provide for such laboratory and other facilities, as may be necessary to carry out the purposes of this Act. In addition, the Director may by agreement secure such services as he may deem necessary from any other Department, agency, or unit of the State Government, and may employ and compensate such consultants and technical assistants as may be required.

(b) The Agency shall have the duty to collect and disseminate such information, acquire such technical data, and conduct such experiments as may be required to carry out the purposes of this Act, including ascertainment of the quantity and nature of discharges from any contaminant source and data on those sources, and to operate and arrange for the operation of devices for the monitoring of environmental quality.

(c) The Agency shall have authority to conduct a program of continuing surveillance and of regular or periodic inspection of actual or potential contaminant or noise sources, of public water supplies, and of refuse disposal sites.

(d) The Agency shall have authority to enter at all reasonable times upon any private or public property for the purpose of inspecting and investigating to ascertain possible violations of the Act or of regulations thereunder, in accordance with constitutional limitations.

(e) The Agency shall have the duty to investigate violations of this Act or of regulations adopted thereunder, to prepare and present enforcement cases before the Board, and to take such summary enforcement action as is provided for by Section 34 of this Act.

(f) The Agency shall appear before the Board in any hearing upon a petition for variance, the denial of a permit, or the validity or effect of a rule or regulation of the Board, and shall have the authority to appear before the Board in any hearing under the Act.

(g) The Agency shall have the duty to administer, in accord with Title X of this Act, such permit and certification systems as may be established by this Act or by regulations adopted thereunder.

(h) The Agency shall have authority to require the submission of complete plans and specifications from any applicant for a permit required by this Act or by regulations thereunder, and to require the submission of such reports regarding actual or potential violations of the Act or of regulations thereunder, as may be necessary for purposes of this Act.

(i) The Agency may prescribe reasonable fees for permits required pursuant to this Act.

(j) The Agency shall have authority to make recommendations to the Board for the adoption of regulations under Title VII of the Act.

(k) The Agency shall have the duty to represent the State of Illinois in any and all matters pertaining

to plans, procedures, or negotiations for interstate compacts or other governmental arrangements relating to environmental protection.

(l) The Agency shall have the authority to accept, receive, and administer on behalf of the State any grants, gifts, loans, or other funds made available to the State from any source for purposes of this Act or for air or water pollution control, public water supply, solid waste disposal, noise abatement, or other environmental protection activities, surveys, or programs. Any federal funds received by the Agency pursuant to this subsection shall be deposited in a trust fund with the State Treasurer and held and disbursed by him in accordance with "An Act in relation to the receipt, custody, and disbursement of money allotted by the United States of America or any agency thereof for use in this State," approved July 3, 1939, as amended, provided that such monies shall be used only for the purposes for which they are contributed and any balance remaining shall be returned to the contributor.

The Agency is authorized to promulgate such regulations and enter into such contracts as it may deem necessary for carrying out the provisions of this subsection.

(m) The Agency is hereby designated as water pollution agency for the state for all purposes of the Federal Water Pollution Control Act, Public Law 80-845, approved June 30, 1948, as amended; as air pollution agency for the state for all purposes of the Federal Air Quality Act, Public Law 90-148, approved November 21, 1948, as amended; and as solid waste agency for the state for all purposes of the Federal Solid Waste Disposal Act, Public Law 89-272, approved October 20, 1965. The Agency is hereby authorized to take all action necessary or appropriate to secure to the State the benefits of such federal Acts, provided that the Agency shall transmit to the United States without change any standards adopted by the Pollution Control Board pursuant to Section 5 (c) of this Act.

Any municipality, sanitary district, or other political subdivision, or any Agency of the State or interstate Agency, which makes application for loans or grants under such federal Acts shall notify the Agency of such application; the Agency may participate in proceedings under such federal Acts.

SECTION 5 (a).

There is hereby created an independent board to be known as the Pollution Control Board, consisting of 5 technically qualified members, no more than 3 of whom may be of the same political party, to be appointed by the Governor with the advice and consent of the Senate. One of the members of the Board first appointed shall be appointed for an initial term expiring July 1, 1971; two members shall be appointed for initial terms expiring July 1, 1972; two members shall be appointed for initial terms expiring July 1, 1973. All successors shall hold office for three years from the first day of July in the year in which they were appointed except in case of an appointment to fill a vacancy. In case of a vacancy in the office when the Senate is not in session, the Governor may make a temporary appointment until the next meeting of the Senate when he shall nominate some person to fill such office; and any person so nominated, who is confirmed by the Senate, shall hold his office during the remainder of the term. If the Senate is not in session at the time this Act takes effect, the Governor shall make temporary appointments as in case of vacancies.

Members of the Board shall hold office until their respective successors have been appointed and qualified. Any member may resign from his office, such resignation to take effect when his successor has been appointed and has qualified.

Board members shall be paid $30,000 per year, and the Chairman $35,000 per year. Each member shall be reimbursed for expenses necessarily incurred, shall devote full time to the performance of his

duties and shall make a financial disclosure upon appointment. Each Board member may employ one secretary and one assistant, and the Chairman one secretary and two assistants. The Board also may employ and compensate hearing officers to preside at hearings under this Act, and such other personnel as may be necessary. Hearing officers shall be attorneys licensed to practice law in Illinois.

The Governor shall designate one Board member to be Chairman, who shall serve at the pleasure of the Governor.

The Board shall hold at least one meeting each month and such additional meetings as may be prescribed by Board rules. In addition, special meetings may be called by the Chairman or by any two Board members, upon delivery of 24 hours' written notice to the office of each member. All Board meetings shall be open to the public, and public notice of all meetings shall be given at least twenty-four hours in advance of each meeting. In emergency situations in which a majority of the Board certifies that exigencies of time require the requirements of public notice and of twenty-four hour written notice to members may be dispensed with, and Board members shall receive such notice as is reasonable under the circumstances.

Three members of the Board shall constitute a quorum, and three votes shall be required for any final determination by the Board, except in a proceeding to remove a seal under paragraph (d) of Section 34 of this Act. The Board shall keep a complete and accurate record of all its meetings.

(b) The Board shall determine, define and implement the environmental control standards applicable in the State of Illinois and may adopt rules and regulations in accordance with Title VII of this Act.

(c) The Board shall have authority to act for the State in regard to the adoption of standards for submission to the United States under any federal law respecting environmental protection. Such standards shall be adopted in accordance with Title VII of the Act and upon adoption shall be forwarded to the Environmental Protection Agency for submission to the United States pursuant to Section 4 (m) of this Act. Nothing in this paragraph shall limit the discretion of the Governor to delegate authority granted him under any federal law.

(d) The Board shall have authority to conduct hearings upon complaints charging violations of this Act or of regulations thereunder; upon petitions for variances; upon petitions for review of the Agency's denial of a permit in accordance with Title X of this Act; upon petition to remove a seal under Section 34 of this Act; and such other hearings as may be provided by rule.

(e) In connection with any hearing pursuant to subsections (b) or (d) of this section the Board may subpoena and compel the attendance of witnesses and the production of evidence reasonably necessary to resolution of the matter under consideration. The Board shall issue such subpoenas upon the request of any party to a proceeding under subsection (d) of this section or upon its own motion.

SECTION 6.

There is hereby established within the Executive Branch of the State Government an institute to be known as the Illinois Institute for Environmental Quality. The Institute shall be under the supervision and control of a Director who shall be appointed by the Governor for a term of three years. The Director may be removed for cause by the Governor after hearing.

The Director, in accord with the Personnel Code, shall employ such personnel, provide such facilities, and contract for such outside services as may be necessary to carry out the purposes of this Act. Maximum use shall be made of existing federal and state agencies, facilities and personnel in conducting research under this title.

It shall be the duty of the Institute to investigate practical problems and implement studies and programs relating to the technology and administration of environmental protection, to obtain, store, and process relevant data, and to recommend technological, administrative, and legislative changes and developments respecting environmental quality and re-cycling, re-use and conservation of natural resources and solid wastes. The Institute shall: (a) cooperate with the Agency, with the Board and with the Illinois State Geological Survey, the Illinois State Natural History Survey and the Illinois State Water Survey and with other federal or state research agencies, facilities or institutes in the selection of projects for study, in order that the Institute may give expert guidance to the Agency and to the Board in the formulation of regulations, the development of enforcement strategies, and other long range program goals; (b) cooperate with the Board of Higher Education and with the public and private colleges and universities in this State in developing interdisciplinary approaches to the problems of environment; (c) evaluate curricula at all levels of education and provide assistance to instructors; and (d) sponsor an annual conference of leaders in government, industry, health and education to evaluate the progress, or lack of progress, in achieving environmental quality.

It is not the intent of this Act that the Institute should engage in abstract scientific research nor generally undertake the investigation of particular cases for presentation before the Board, except where long-range goals may dictate a special need. As soon as practical the Director shall establish within the Institute a Solid Waste Management Task Force to make surveys and recommendations regarding the development of regional systems of solid waste and refuse collection, handling and disposal; for coordinating municipal and industrial solid waste disposal programs; to expedite development of systems for the re-cycling and re-use of refuse and solid waste materials; and to make periodic reports and recommendations for submission to the Board by the Institute at such intervals as to assure compliance with the purposes of this Act and paragraph. The Board shall make rules and regulations on these subjects based upon such recommendations. The Task Force shall be composed of Institute, municipal, county, state and industrial representatives technically qualified in the area of solid waste management.

The Institute shall file an annual report of its activities and recommendations with the Governor and with the General Assembly.

SECTION 7 (a).
All files, records, and data of the Agency, the Board, and the Institute shall be open to reasonable public inspection and may be copied upon payment of the actual cost of reproducing the original except for the following:

(i) information which constitutes a trade secret;

(ii) information privileged against introduction in judicial proceedings;

(iii) internal communications of the several agencies;

(iv) information concerning secret manufacturing processes or confidential data submitted by any person under this Act.

(b) Except for reproduction charges under Section 7 (a), 28 and 32, and for such permit fees as may be prescribed under Section 4 (i), neither the Agency, the Board, nor the Institute shall charge any fee for the performance of its respective duties under this Act.

TITLE II: AIR POLLUTION

SECTION 8.
The General Assembly finds that pollution of the air of this State constitutes a menace to public health and welfare, creates public nuisances, adds to cleaning costs, accelerates the deterioration of materials, adversely affects agriculture, business, industry, recreation, climate, and visability, depresses property values, and offends the senses.

It is the purpose of this Title to restore, maintain, and enhance the purity of the air of this State in order to protect health, welfare, property, and the quality of life and to assure that no air contaminants are discharged into the atmosphere without being given the degree of treatment or control necessary to prevent pollution.

SECTION 9.
No person shall:

(a) Cause or threaten or allow the discharge or emission of any contaminant into the environment in any State so as to cause or tend to cause air pollution in Illinois, either alone or in combination with contaminants from other sources, or so as to violate regulations or standards adopted by the Board under this Act;

(b) Construct, install, or operate any equipment, facility, vehicle, vessel, or aircraft capable of causing or contributing to air pollution or designed to prevent air pollution, of any type designated by Board regulations, without a permit granted by the Agency, or in violation of any conditions imposed by such permit;

(c) Cause or allow the open burning of refuse, conduct any salvage operation by open burning, or cause or allow the burning of any refuse in any chamber not specifically designed for the purpose and approved by the Agency pursuant to regulations adopted by the Board under this Act: except that the Board may adopt regulations permitting open burning of refuse in certain cases upon a finding that no harm will result from such burning, or that any alternative method of disposing of such refuse would create a safety hazard so extreme as to justify the pollution that would result from such burning;

(d) Sell, offer, or use any fuel or other article in any areas in which the Board may by regulation forbid its sale, offer, or use for reasons of air-pollution control.

SECTION 10.
The Board, pursuant to procedures prescribed in Title VII of this Act, may adopt regulations to promote the purposes of this Title. Without limiting the generality of this authority, such regulations may among other things prescribe:

(a) Ambient air quality standards specifying the maximum permissible short-term and long-term concentrations of various contaminants in the atmosphere;

(b) Emission standards specifying the maximum amounts or concentrations of various contaminants that may be discharged into the atmosphere;

(c) Standards for the issuance of permits for construction, installation, or operation of any equipment, facility, vehicle, vessel, or aircraft capable of causing or contributing to air pollution or designed to prevent air pollution;

(d) Standards and conditions regarding the sale, offer, or use of any fuel, vehicle, or other article dedetermined by the Board to constitute an air-pollution hazard;

(e) Alert and abatement standards relative to air-pollution episodes or emergencies constituting an acute danger to health or to the environment;

(f) Requirements and procedures for the inspection of any equipment, facility, vehicle, vessel, or aircraft that may cause or contribute to air pollution;

(g) Requirements and standards for equipment and procedures for monitoring contaminant discharges at their sources, the collection of samples and the collection, reporting and retention of data resulting from such monitoring.

TITLE III: WATER POLLUTION

SECTION 11.
The General Assembly finds that pollution of the waters of this State constitutes a menace to public health and welfare, creates public nuisances, is harmful to wildlife, fish, and aquatic life, impairs domestic, agricultural, industrial, recreational, and other legitimate beneficial uses of water, depresses property values, and offends the senses.

It is the purpose of this Title to restore, maintain, and enhance the purity of the waters of this State in order to protect health, welfare, property, and the quality of life, and to assure that no contaminants are discharged into the waters without being given the degree of treatment or control necessary to prevent pollution.

SECTION 12.
No person shall:

(a) Cause or threaten or allow the discharge of any contaminants into the environment in any State so as to cause or tend to cause water pollution in Illinois, either alone or in combination with matter from other sources, or so as to violate regulations or standards adopted by the Pollution Control Board under this Act;

(b) Construct, install, or operate any equipment, facility, vessel, or aircraft capable of causing or contributing to water pollution, or designed to prevent water pollution, of any type designated by Board regulations, without a permit granted by the Agency, or in violation of any conditions imposed by such permit;

(c) Increase the quantity or strength of any discharge of contaminants into the waters, or construct or install any sewer or sewage treatment facility or any new outlet for contaminants into the waters of this State, without a permit granted by the Agency;

(d) Deposit any contaminants upon the land in such place and manner so as to create a water pollution hazard;

(e) Sell, offer, or use any article in any area in which the Board has by regulation forbidden its sale, offer, or use for reasons of water-pollution control.

SECTION 13.

The Board, pursuant to procedures prescribed in Title VII of this Act, may adopt regulations to promote the purposes of this Title. Without limiting the generality of this authority, such regulations may among other things prescribe:

(a) Water quality standards specifying among other things, the maximum short-term and long-term concentrations of various contaminants in the waters, the minimum permissible concentrations of dissolved oxygen and other desirable matter in the waters, and the temperature of such waters;

(b) Effluent standards specifying the maximum amounts or concentrations, and the physical, thermal, chemical, biological and radioactive nature of contaminants that may be discharged into the waters;

(c) Standards for the issuance of permits for construction, installation, or operation of any equipment, facility, vessel, or aircraft capable of causing or contributing to water pollution or designed to prevent water pollution or for the construction or installation of any sewer or sewage treatment facility or any new outlet for contaminants into the waters of this State;

(d) Standards for the definition and certification of the technical competency of operation personnel for sewage works, and for ascertaining that such works shall be under the supervision of trained individuals whose qualifications shall have been approved by the Agency;

(e) Standards for the filling or sealing of abandoned water wells and holes, and holes for disposal of drainage in order to protect ground water against contamination;

(f) Standards and conditions regarding the sale, offer, or use of any pesticide, detergent, or any other article determined by the Board to constitute a water pollution hazard, provided that any such regulations relating to pesticides shall be adopted only in accordance with "An Act to create an interagency committee on pesticides to study and to advise in the use of pesticides, and to recommend any needed legislation concerning pesticides, approved August 9, 1965, as amended";

(g) Alert and abatement standards relative to water-pollution episodes or emergencies which constitute an acute danger to health or to the environment;

(h) Requirements and procedures for the inspection of any equipment, facility, or vessel that may cause or contribute to water pollution;

(i) Requirements and standards for equipment and procedures for monitoring contaminant discharges at their sources, the collection of samples and the collection, reporting and retention of data resulting from such monitoring.

TITLE IV: PUBLIC WATER SUPPLIES

SECTION 14.
The General Assembly finds that state supervision of public water supplies is necessary in order to protect the public from disease and to assure an adequate supply of pure water for all beneficial uses.

It is the purpose of this Title to assure adequate protection of public water supplies.

SECTION 15.
Owners of public water supplies, their authorized representative, or legal custodians, shall submit plans and specifications to the Agency and obtain written approval before construction of any proposed public water supply installations, changes, or additions is started. Plans and specifications shall be complete and of sufficient detail to show all proposed construction, changes, or additions that may affect sanitary quality, mineral quality, or adequacy of the public water supply; and, where necessary, said plans and specifications shall be accompanied by supplemental data as may be required by the Agency to permit a complete review thereof.

SECTION 16.
Plans and specifications submitted pursuant to Section 15 of this Act shall be approved if determined by the Agency to be satisfactory from the standpoint of sanitary quality, mineral quality, and adequacy of the water supply.

SECTION 17.
The Board may adopt regulations governing the location, design, construction, and continuous operation and maintenance of public water supply installations, changes or additions which may affect the continuous sanitary quality, mineral quality, or adequacy of the public water supply, pursuant to Title VII of this Act.

SECTION 18.
Owners and official custodians of public water supplies shall direct and maintain the continuous operation and maintenance of water-supply facilities so that water shall be assuredly safe in quality, clean, adequate in quantity, and of satisfactory mineral character for ordinary domestic consumption.

SECTION 19.
Owners or official custodians of public water supplies shall submit such samples of water for analysis and such reports of operation pertaining to the sanitary quality, mineral quality, or adequacy of such supplies as may be requested by the Agency. Such samples and reports shall be submitted within 15 days after demand by the Agency.

TITLE V: LAND POLLUTION and REFUSE DISPOSAL

SECTION 20.
The General Assembly finds that economic and population growth and new methods of manufacture, packaging, and marketing, without the parallel growth of facilities enabling and ensuring the re-cycling, re-use and conservation of natural resources and solid waste, have resulted in a rising tide of scrap and waste materials of all kinds; that excessive quantities of refuse and inefficient and improper methods of refuse disposal result in scenic blight, cause serious hazards to public health and safety, create public nuisances, divert land from more productive uses, depress the value of nearby property, offend the senses, and otherwise interfere with community life and development; that the failure to salvage and reuse scrap and refuse results in the waste and depletion of our natural resources and contributes to the degradation of our environment.

It is the purpose of this Title to prevent the pollution or misuse of land, to promote the conservation of natural resources and minimize environmental damage by reducing the difficulty of disposal of wastes and encouraging and effecting the re-cycling and re-use of waste materials, and upgrading waste collection and disposal practices.

SECTION 21.
No person shall:

(a) Cause or allow the open dumping of garbage;

(b) Cause or allow the open dumping of any other refuse in violation of regulations adopted by the Board;

(c) Abandon, dump, or deposit any refuse upon the public highways or other public property, except in a sanitary landfill approved by the Agency pursuant to regulations adopted by the Board;

(d) Abandon any vehicle in violation of the "Abandoned Vehicles Amendment to the Illinois Vehicle Code", as enacted by the 76th General Assembly;

(e) Conduct any refuse-collection or refuse-disposal operations, except for refuse generated by the operator's own activities, without a permit granted by the Agency upon such conditions, including periodic reports and full access to adequate records and the inspection of facilities, as may be necessary to assure compliance with this Act and with regulations adopted thereunder, after the Board has adopted standards for the location, design, operation, and maintenance of such facilities;

(f) Dispose of any refuse, or transport any refuse into this State for disposal, except at a site or facility which meets the requirements of this Act and of regulations thereunder.

SECTION 22.
In accord with Title VII of this Act, the Board may adopt regulations to promote the purposes of this Title. Without limiting the generality of this authority, such regulations may among other things prescribe the following:

(a) Standards for the location, design, construction, sanitation, operation, maintenance, and discontinuance of the operation of refuse collection and disposal sites and facilities;

(b) Standards for the certification of personnel to operate refuse-disposal facilities or sites;

(c) Standards for the dumping of any refuse;

(d) Requirements and standards for equipment and procedures for monitoring contaminant discharges at their source, the collection of samples and the collection, reporting and retention of data resulting from such monitoring.

TITLE VI: NOISE

SECTION 23.
The General Assembly finds that excessive noise endangers physical and emotional health and well-being, interferes with legitimate business and recreational activities, increases construction costs, depresses property values, offends the senses, creates public nuisances, and in other respects reduces the quality of our environment.

It is the purpose of this Title to prevent noise which creates a public nuisance.

SECTION 24.
No person shall emit beyond the boundaries of his property any noise that unreasonably interferes with the enjoyment of life or with any lawful business or activity, so as to violate any regulation or standard adopted by the Board under this Act.

SECTION 25.
The Board, pursuant to the procedures prescribed in Title VII of this Act, may adopt regulations prescribing limitations on noise emissions beyond the boundaries of the property of any person and prescribing requirements and standards for equipment and procedures for monitoring noise and the collection, reporting and retention of data resulting from such monitoring.

TITLE VI-A: ATOMIC RADIATION

The General Assembly finds that radiation constitutes a serious threat to health and well-being. A person, corporation or public authority intending to construct a nuclear steam-electric generating facility or a nuclear fuel reprocessing plant shall file with the Board an environmental feasibility report, in a form prescribed by the Board, concurrently with the filing of the preliminary safety analysis required to be filed with the United States Atomic Energy Commission. No person, corporation or public authority shall construct or operate a new nuclear steam-electric generating facility or nuclear fuel reprocessing plant or increase the capacity without a permit issued by the Board. The Board shall conduct a public hearing at a time and place to be determined by the Board on the environmental effects of the proposed operation. Notice of such application and hearing shall be timely served upon the Attorney General of the State of Illinois and upon any municipality or other governmental unit having jurisdiction over any domestic water supply in this State that might be affected by such construction or operation. The Attorney General and any governmental units having such jurisdiction may be parties to any hearing provided in this Title. Any other interested person has the right to participate in the hearing, subject to the power of the Board to promulgate reasonable rules and regulations governing the extent of such participation.

Any permit granted under this Title shall specify the maximum allowable level of radioactive discharge, as determined by the Board, and such permit shall not be valid to justify any radioactive discharge exceeding that permissible limit. The Board's order shall include a requirement for appropriate procedures of monitoring such discharge. Documents and materials filed with the Board and the Board's findings of fact and final decision shall be open to public inspection.

The Board shall have the power to adopt standards to protect the citizens of Illinois from the hazards of radiation.

TITLE VII: REGULATIONS

SECTION 26.

The Board may adopt such procedural rules as may be necessary to accomplish the purposes of this Act. Notice of the proposed adoption of procedural rules shall be given in accord with Section 28 of this Act, and any person may submit written statements regarding such proposals.

SECTION 27.

The Board may adopt substantive regulations as described in Sections 10, 13, 17, 22 and 25 of this Act. Any such regulations may make different provisions as required by circumstances for different contaminant sources and for different geographical areas; may apply to sources outside this State causing, contributing to, or threatening environmental damage in Illinois; and may make special provision for alert and abatement standards and procedures respecting occurrences or emergencies of pollution or on other short-term conditions constituting an acute danger to health or to the environment. In promulgating regulations under this Act, the Board shall take into account the existing physical conditions, the character of the area involved, including the character of surrounding land uses, zoning classifications, the nature of the existing air quality, or receiving body of water, as the case may be, and the technical feasibility and economic reasonableness of measuring or reducing the particular type of pollution. The generality of of this grant of authority shall only be limited by the specifications of particular classes of regulations elsewhere in this Act.

No charge shall be established or assessed by the Board or Agency against any person for emission of air contaminants from any source, for discharge of water contaminants from any source, for the sale, offer or use of any article, or for disposal of any refuse.

SECTION 28.

Any person may present written proposals for the adoption, amendment, or repeal of the Board's regulations, and the Board may make such proposals on its own motion. If the Board finds that any such proposal is supported by an adequate statement of reasons, is accompanied by a petition signed by at least 200 persons, is not plainly devoid of merit and does not deal with a subject on which a hearing has been held within the preceding 6 months, the Board shall schedule a public hearing for consideration of the proposal. If such proposal is made by the Agency or by the Institute, the Board shall schedule a public hearing without regard to the above conditions. The Board may also in its discretion schedule a public hearing upon any proposal without regard to the above conditions.

No substantive regulation shall be adopted, amended, or repealed until after a public hearing within the area of the State concerned. In the case of state-wide regulations hearings shall be held in at least two areas. At least 20 days prior to the scheduled date of the hearing the Board shall give notice of such hearing by public advertisement in a newspaper of general circulation in the area of the state concerned of the date, time, place and purpose of such hearing; give written notice to any person in the area concerned who has in writing requested notice of public hearings; and make available to any person upon request copies of the proposed regulations, together with summaries of the reasons supporting their adoption.

Any public hearing relating to the adoption, amendment, or repeal of Board regulations under this subsection shall be held before a qualified hearing officer, who shall be attended by at least one member of the Board, designated by the Chairman. All such hearings shall be open to the public, and reasonable opportunity to be heard with respect to the subject of the hearing shall be afforded to any person. All testimony taken before the Board shall be recorded stenographically. The transcript so recorded, and any written submissions to the Board in relation to such hearings, shall be open to public inspection, and copies thereof shall be made available to any person upon payment of the actual cost of reproducing the original.

After such hearing the Board may revise the proposed regulations before adoption in response to suggestions made at the hearing, without conducting a further hearing on the revisions.

Any person heard or represented at a hearing or requesting notice shall be given written notice of the action of the Board with respect to the subject thereof.

No rule or regulation, or amendment or repeal thereof, shall become effective until a certified copy thereof has been filed with the Secretary of State, and thereafter as provided in "An Act concerning administrative rules," approved June 14, 1951, as amended.

SECTION 29.

Any person adversely affected or threatened by any rule or regulation of the Board may obtain a determination of the validity or application of such rule or regulation by petition for review under Section 41 of this Act.

TITLE VIII: ENFORCEMENT

SECTION 30.
The Agency shall cause investigations to be made upon the request of the Board or upon receipt of information concerning an alleged violation of this Act or of any rule or regulation promulgated thereunder and may cause to be made such other investigations as it shall deem advisable.

SECTION 31 (a).
If such investigation discloses that a violation may exist, the Agency shall issue and serve upon the person complained against a written notice, together with a formal complaint, which shall specify the provision of this law or the rule or regulation under which such person is said to be in violation, and a statement of the manner in, and the extent to which such person is said to violate this law or such rule or regulation and shall require the person so complained against to answer the charges of such formal complaint at a hearing before the Board at a time not less than 21 days after the date of notice, except as provided in Section 34 of this Act. A copy of such notice and complaint shall also be sent to any person who has complained to the Agency respecting the respondent within the six months preceding the date of the complaint, and to any person in the county in which the offending activity occurred who has requested notice of enforcement proceedings; 21 days notice of such hearings shall also be published in a newspaper of general circulation in such county. The respondent may file a written answer, and at such hearing the rules prescribed in Sections 32 and 33 of this Act shall apply. In the case of actual or threatened acts outside Illinois contributing to environmental damage in Illinois, the extra-territorial service-of-process provisions of sections 16 and 17 of the Civil Practice Act shall apply.

(b) Any person may file with the Board a complaint, meeting the requirements of subsection (a) of this section, against any person allegedly violating this Act or any rule or regulation thereunder. The complainant shall immediately serve a copy of such complaint upon the person or persons named therein. Unless the Board determines that such complaint is duplicitous or frivolous, it shall schedule a hearing and serve written notice thereof upon the person or persons named therein, in accord with subsection (a) of this section.

(c) In hearings before the Board under this Title the burden shall be on the Agency or other complainant to show either that the respondent has caused or threatened to cause air or water pollution or that the respondent has violated or threatens to violate any provision of this Act or any rule or regulation of the Board. If such proof has been made, the burden shall be on the respondent to show that compliance with the Board's regulations would impose an arbitrary or unreasonable hardship.

SECTION 32.
All hearings under this Title shall be held before a qualified hearing officer, who may be attended by at least one member of the Board, designated by the Chairman. All such hearings shall be open to the public, and any person may submit written statements to the Board in connection with the subject thereof. In addition, the Board may permit any person to offer oral testimony.

Any party to a hearing under this subsection may be represented by counsel, may make oral or written argument, offer testimony, cross-examine witnesses, or take any combination of such actions. All testimony taken before the Board shall be recorded stenographically. The transcript so recorded, and any additional matter accepted for the record, shall be open to public inspection, and copies thereof shall be made available to any person upon payment of the actual cost of reproducing the original.

SECTION 33 (a).

After due consideration of the written and oral statements, the testimony and arguments that shall be submitted at the hearing, or upon default in appearance of the respondent on return day specified in the notice, the Board shall issue and enter such final order, or make such final determination, as it shall deem appropriate under the circumstances. In all such matters the Board shall file and publish a written opinion stating the facts and reasons leading to its decision. The Board shall immediately notify the respondent of such order in writing by registered mail.

(b) Such order may include a direction to cease and desist from violations of the Act or of the Board's rules and regulations and/or the imposition by the Board of money penalties in accord with Title XII of this Act. The Board may also revoke the permit as a penalty for violation. If such order includes a reasonable delay during which to correct a violation, the Board may require the posting of sufficient performance bond or other security to assure the correction of such violation within the time prescribed.

(c) In making its orders and determinations, the Board shall take into consideration all the facts and circumstances bearing upon the reasonableness of the emissions, discharges, or deposits involved including, but not limited to:

(i) the character and degree of injury to, or interference with the protection of the health, general welfare and physical property of the people;

(ii) the social and economic value of the pollution source;

(iii) the suitability or unsuitability of the pollution source to the area in which it is located, including the question of priority of location in the area involved; and

(iv) the technical practicability and economic reasonableness of reducing or eliminating the emissions, discharges or deposits resulting from such pollution source.

SECTION 34 (a).

Upon a finding that episode or emergency conditions specified in Board regulations exist, the Agency shall declare such alerts or emergencies as provided by those regulations. While such an alert or emergency is in effect, the Agency may seal any equipment, vehicle, vessel, aircraft, or other facility operated in violation of such regulations.

(b) In other cases in which the Agency finds that an emergency condition exists creating an immediate danger to health, the Agency may seal any equipment, vehicle, vessel, aircraft, or other facility contributing to the emergency condition.

(c) It shall be a misdemeanor to break any seal affixed under this section, or to operate any sealed equipment, vehicle, vessel, aircraft, or other facility until the seal is removed according to law.

(d) The owner or operator of any equipment, vehicle, vessel, aircraft or other facility sealed pursuant to this section is entitled to a hearing in accord with Section 32 of this Act to determine whether the seal should be removed; except that in such hearing at least one Board member shall be present, and those Board members present may render a final decision without regard to the requirements of paragraph (a) of Section 5 of this Act. The petitioner may also seek immediate injunctive relief.

TITLE IX: VARIANCES

SECTION 35.
The Board may grant individual variances beyond the limitations prescribed in this Act, whenever it is found, upon presentation of adequate proof, that compliance with any rule or regulation, requirement or order of the Board would impose an arbitrary or unreasonable hardship. In granting or denying a variance the Board shall file and publish a written opinion stating the facts and reasons leading to its decision.

SECTION 36 (a).
In granting a variance the Board may impose such conditions as the policies of this Act may require. If the hardship complained of consists solely of the need for a reasonable delay in which to correct a violation of this Act or of the Board regulations, the Board shall condition the grant of such variance upon the posting of sufficient performance bond or other security to assure the correction of such violation within the time prescribed.

(b) Any variance granted pursuant to the provisions of this section shall be granted for such period of of time, not exceeding one year, as shall be specified by the Board at the time of the grant of such variance, and upon the condition that the person who receives such variance shall make such periodic progress reports as the Board shall specify. Such variance may be extended from year to year by affirmative action of the Board, but only if satisfactory progress has been shown.

SECTION 37.
Any person seeking a variance shall do so by filing a petition for variance with the Agency. The Agency shall promptly give written notice of such petition to any person in the county in which the installation or property for which variance is sought is located who has in writing requested notice of variance petitions, and shall publish notice of such petition in a newspaper of general circulation in such county. The Agency shall promptly investigate such petition, consider the views of persons who might be adversely affected by the grant of a variance, and make a recommendation to the Board as to the disposition of the petition. If the Board, in its discretion, concludes that a hearing would be advisable, or if the Agency or any other person files a written objection to the grant of such variance within 21 days, then a hearing shall be held, under the rules prescribed in Sections 32 and 33 (a) of this Act, and the burden of proof shall be on the petitioner.

SECTION 38.
If the Board fails to take final action upon a variance request within 90 days after the filing of the petition, the petitioner may deem the request granted under this Act. If any person files a petition for a variance from a rule or regulation within 20 days after the effective date of such rule or regulation, the operation of such rule or regulation shall be stayed as to such person pending the disposition of the petition. The Board may hold a hearing upon said petition five days from the date of notice of such hearing or thereafter. All the provisions of this Title shall apply to petitions for extension of existing variances and to proposed Contaminant Reduction programs designed to secure delayed compliance with the Act or with Board regulations.

TITLE X: PERMITS

SECTION 39.

When the Board has by regulation required a permit for the construction, installation, or operation of any type of facility, equipment, vehicle, vessel, or aircraft, it shall be the duty of the Agency to issue such a permit upon proof by the applicant that the facility, equipment, vehicle, vessel, or aircraft will not cause a violation of this Act or of regulations hereunder. The Agency shall adopt such procedures as are necessary to carry out its duties under this Section. In granting permits the Agency may impose such conditions as may be necessary to accomplish the purposes of this Act, and as are not inconsistent with the regulations promulgated by the Board hereunder.

If there is no final action by the Agency within 90 days after the filing of the application for permit, the applicant may deem the permit issued.

SECTION 40.

If the Agency refuses to grant a permit under Section 39 of this Act, the applicant may petition for a hearing before the Board to contest the decision of the Agency. The Board shall give 21 day notice to any person in the county where is located the facility in issue who has requested notice of enforcement proceedings; and shall publish that 21 day notice in a newspaper of general circulation in that county. The Agency shall appear as respondent in such hearing. At such hearing the rules prescribed in Sections 32 and 33 (a) of this Act shall apply, and the burden of proof shall be on the petitioner. If there is no final action by the Board within 90 days, petitioner may deem the permit issued under this Act.

TITLE XI: JUDICIAL REVIEW

SECTION 41.

Any party to a Board hearing, any person who files a complaint on which a hearing was denied, any person who has been denied a variance or permit under this Act, and any party adversely affected by a final order or determination of the Board may obtain judicial review, by filing a petition for review within thirty-five days after entry of the order or other final action complained of, pursuant to the provisions of the "Administration Review Act," approved May 8, 1945, as amended and the rules adopted pursuant thereto, except that review shall be afforded directly in the Appellate Court for the District in which the cause of action arose and not in the Circuit Court. Review of any rule or regulation promulgated by the Board shall not be limited by this section but may also be had as provided in Section 29 of this Act.

No challenge to the validity of a Board order shall be made in any enforcement proceeding under Title XII of this Act as to any issue that could have been raised in a timely petition for review under this Section.

TITLE XII: PENALTIES

SECTION 42.

Any person who violates any provision of this Act, or any regulation adopted by the Board, or who violates any determination or order of the Board pursuant to this Act, shall be liable to a penalty of not to exceed $10,000 for said violation and an additional penalty of not to exceed $1,000 for each day during which violation continues, which may be recovered in a civil action, and such person may be enjoined

from continuing such violation as hereinafter provided. Any person who violates this Act, or an order or other determination of the Board under this Act and causes the death of fish or aquatic life shall, in addition to the other penalties provided by this Act, be liable to pay to the State an additional sum for the reasonable value of the fish or aquatic life destroyed. Any money so recovered shall be placed in the Game and Fish Fund in the State Treasury.

The State's Attorney of the county in which the violation occurred, or the Attorney General shall bring such actions in the name of the people of the State of Illinois.

SECTION 43.
In circumstances of extreme emergency creating conditions of immediate danger to the public health, the State's Attorney or Attorney General may institute a civil action for an immediate injunction to halt any discharge or other activity causing the danger. The court may issue an ex parte order and shall schedule a hearing on the matter not later than 3 working days from the date of injunction.

SECTION 44.
It shall be a misdemeanor to violate this Act or regulations thereunder, or knowingly to submit any false information under this Act or regulations adopted thereunder. It shall be the duty of all state and local law-enforcement officers to enforce such Act and regulations, and all such officers shall have authority to issue citations for such violations.

SECTION 45 (a).
No existing civil or criminal remedy for any wrongful action shall be excluded or impaired by this Act. Nothing in this Act shall be construed to limit or supersede the provisions of "An Act in relation to oil, gas, coal and other surface and underground resources and to repeal an Act herein named", filed July 29, 1941, as amended, and the powers therein granted to prevent the intrusion of water into oil, gas or coal strata and to prevent the pollution of fresh water supplies by oil, gas or salt water or oil field wastes, except that water quality standards as set forth by the Pollution Control Board apply to and are effective within the areas covered by and affected by permits issued by the Department of Mines and Minerals. Providing that if the Department of Mines and Minerals fails to act upon any compiaint within a period of ten working days following the receipt of said complaint by the Department, the Environmental Protection Agency may proceed under the provisions of this Act.

(b) Any person adversely affected in fact by a violation of this Act or of regulations adopted thereunder may sue for injunctive relief against such violation. However, no action shall be brought under this Section until 30 days after the plaintiff has been denied relief by the Board under paragraph (b) of Section 31 of this Act. The prevailing party shall be awarded costs and reasonable attorneys' fees.

TITLE XIII: MISCELLANEOUS PROVISIONS

SECTION 46.
Any municipality or sanitary district which has been directed by an order issued by the Board or by a Court of competent jurisdiction to abate any violation of this Act or of any regulation adopted thereunder

shall, unless said order be set aside upon petition for review, take steps for the acquisition or construction of such facilities, or for such repair, alteration, extension or completion of existing facilities, or for such modification of existing practices as may be necessary to comply with the order. The cost of the acquisition, construction, repair, alteration, completion, or extension of such facilities, or of such modification of practices shall be paid out of funds on hand available for such purposes, or out of the general funds of such municipality or sanitary district not otherwise appropriated.

If funds on hand or unappropriated are insufficient for the purposes of this section, the necessary funds shall be raised by the issuance of either general obligation or revenue bonds. If the estimated cost of the steps necessary to be taken by such municipality or sanitary district to comply with such order is such that the bond issue, necessary to finance such project, would not raise the total outstanding bonded indebtedness of such municipality or sanitary district in excess of the limit imposed upon such indebtedness by the Constitution of the State of Illinois, the necessary bonds may be issued as a direct obligation of such municipality or sanitary district and retired pursuant to general law governing the issue of such bonds. No election or referendum shall be necessary for the issuance of bonds under this section.

The funds made available by the issuance of direct obligation or revenue bonds as herein provided shall constitute a Sanitary Fund, and shall be used for no other purpose than for carrying out such order or orders of the Board.

The Attorney General shall enforce this provision of the act by an action for mandamus, injunction, or other appropriate relief.

SECTION 47 (a).
The State of Illinois and all its agencies, institutions, officers and subdivisions shall comply with all requirements, prohibitions, and other provisions of the Act and of regulations adopted thereunder.

(b) Each state agency or institution shall annually assess the environmental problems created by its operations and the extent to which its operations are in violation of this Act or of regulations adopted thereunder, and shall report to the Environmental Protection Agency on or before December 1 of each year as to the findings of such assessment, the progress made in eliminating such violations, and the steps to be taken in the future to assure compliance.

(c) Each state agency or institution shall submit to the Environmental Protection Agency complete plans, specifications and cost estimates for any proposed installation or facility that may cause a violation of this Act or of regulations adopted thereunder by December 1 of each year.

SECTION 48 (a).
Whenever the Board has adopted regulations respecting the equipment, specifications, use, inspection, or sale of vehicles, vessels, or aircraft, no department or agency shall license any such vehicles, vessels, or aircraft for operation in this State in the absence of such proof as the Board may prescribe that the equipment in question satisfies the Board's regulations.

(b) Whenever the Board has adopted regulations limiting vehicle, vessel, or aircraft operations to essential or other classes of use under certain conditions, the department or agency responsible for the

licensing shall issue indicia of such use, subject to standards prescribed by the Board, for each vehicle, vessel, or aircraft qualifying therefor.

SECTION 49 (a).
Until the Board and the Agency established by this Act has been appointed and taken office, the functions assigned to the Board and to the Agency shall be performed by the members of the existing Air Pollution Control Board and Sanitary Water Board and by the Department of Public Health.

(b) All proceedings respecting acts done before the effective date of this Act shall be determined in accordance with the law and regulations in force at the time such acts occurred. All proceedings instituted for actions taken after the effective date of this Act shall be governed by this Act.

(c) All rules and regulations of the Air Pollution Control Board, the Sanitary Water Board, or the Department of Public Health relating to subjects embraced within this Act shall remain in full force and effect until repealed, amended, or superseded by regulations under this Act.

(d) All orders entered, permits or certifications granted, and pending proceedings instituted by the Air Pollution Control Board, the Sanitary Water Board, or the Department of Public Health relating to subjects embraced within this Act shall remain in full force and effect until superseded by actions taken under this Act.

(e) Compliance with the rules and regulations promulgated by the Board under this Act shall constitute a prima facie defense to any action, legal, equitable, or criminal, or an administrative proceeding for a violation of this Act, brought by any person.

SECTION 50.
The following acts are hereby repealed:

"An Act to establish a sanitary water board and to control, prevent and abate pollution of the streams, lakes, ponds and other surface and underground waters in the State and to repeal an Act named therein", approved July 12, 1951, as amended; the "Illinois Air Pollution Control Act", approved August 19, 1963, as amended; "An Act designating the Sanitary Water Board to act as the state water pollution agency for purposes of the Federal Water Pollution Control Act and giving it powers therefor", approved July 12, 1951, as amended; "An Act to prohibit open garbage dumps or sites", approved August 26, 1963, as amended; "An Act in relation to the registration and regulation of refuse disposal sites and facilities and making appropriations therefor", approved August 18, 1965, as amended; and "An Act to prohibit the dumping of refuse brought from outside of the State", approved May 11, 1967.

SECTION 51.
If any section, subsection, sentence or clause of this Act shall be adjudged unconstitutional, such adjudication shall not affect the validity of the Act as a whole or of any section, subsection, sentence or clause thereof not adjudged unconstitutional.

APPENDIX II

The Environmental Protection Act of 1970--

Considerations and Passage

The formulation of the Environmental Protection Act began in early 1970. Governor Ogilvie appointed Mr. David Currie, Illinois Coordinator of Environmental Quality, to draft a bill creating a new environmental protection organizational arrangement. Prior to this appointment as environmental coordinator, Mr. Currie was a Professor of Law at the University of Chicago.

The bill was introduced for a first reading to the House Executive Committee on April 17, 1970. The rationale for the bill given by Governor Ogilvie at that session was:

> ...the legislation is needed because pollution control authority is divided among too many agencies,...(and) present pollution laws are full of loopholes and permit long delays for polluters.[1]

David Currie, introducing the bill to the House Executive Committee, stated that:

> ...the central purposes of the proposed act are to reorganize the state environmental protection arrangements; to strengthen and streamline the procedures for enforcing

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[1]"State Plans for Pollution Agency Told," Chicago Tribune, April, 18, 1970, Sect. 1, p. 6.

[2]Hearings before the House Executive Committee on the Environmental Protection Act of 1970, 76th General Assemble, 1st Session, April 17, 1970.

> the laws relating to environmental protection; and to strengthen the substantive provisions of those laws in several ways...[2]

Currie's expressed dissatisfactions with the then existing system of environmental protection were: 1) environmental protection with health as the central scheme was too narrow--the problems entail industry, esthetics, recreation and other "non-health" areas; 2) authority under the system was fragmented and communications lines were too dispersed; and 3) the Sanitary Water Board was staffed by unpaid, part-time volunteers and appointees which resulted in the staff becoming in substance both prosecutor and judge--a situation not consistent with the impartiality expected of an arbiter under the rules of law.[3]

Governor Ogilvie chose Representative George Burditt, Republican from Chicago to sponsor the bill through the House. Rep. Burditt was given the bill to review in early April. On the first reading he noted it was obvious that the author of the bill was a Professor of Environmental Law.[4] Rep. Burditt considered himself somewhat more practical than the "idealism" reflected in the bill. He felt that certain clauses should be rewritten and some removed. He was very much opposed to two proposals of the bill. The first, Section 49, was the granting of standing to sue to Illinois citizens. This is here after referred to as the "standing clause". The second concern of Rep. Burditt was what he termed a "license to pollute".

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[3] Ibid.

[4] Based on a personal interview with Representative George Burditt, in Springfield, Illinois, June, 1972.

The idea of standing to sue is set forth in law to make some distinctions between public interests and private interests. In litigating a given complaint, the courts must ask themselves whether or not it is reasonable to allow a single individual to take action on a case that in reality affects the public at large. For example:

> Even though the citizen may claim that he is being "hurt" by the taxes extracted from him by a government to support what the citizen claims is an illegal war (Viet Nam), courts nevertheless uniformly hold that the citizen lacks "standing to sue". The reason given is that his particular "harm" is suffered equally by everyone else, and thus his "case" is actually a public matter, a political concern.[5]

Section 49 of the draft of H.B. 3788 granted standing as follows:

> Every person has the right to a clean, healthful environment. Any person has standing to sue in the courts of Illinois to secure compensatory, declaratory, or preventive relief against actual or threatened infringement of this right by governmental or private action.[6]

This section was also quite explicit in forcing the defendent in any given complaint to show cause for his action.

> ...the burden shall be upon the defense to show by a clear preponderance of the evidence that such damage be justified by countervailing benefits of the challenged action.[7]

Section 49 was altered slightly in the House by Amendment Number 26. But the "standing clause" was maintained.

Rep. Burditt's reference to a "license to pollute" was directed at

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[5]Norman Landon and Paul Rheingold, The Environmental Law Handbook, (New York: Ballantine Books, 1971) p. 86.

[6]H.R. 3788, 76th General Assembly, 1st Session (1970).

[7]Ibid.

Section 2 (d) of the bill. Article (d) allowed monetary assessments, "charges", to be levied on polluters in accordance with the amount and type of pollution involved in a given violation. Rep. Burditt felt that in effect this was forcing the polluter to "purchase" a license to pollute.[8] Charges were defined in the bill as:

> ...money payments to the State for the privilege of discharging contaminants, depositing refuse, or selling, offering, or using an article that may cause the discharge of contaminants or create a disposal problem.[9]

As regards water pollution, charges were included in the bill as follows:

> Charges for the discharge of water contaminants or for the operation of vessels in various areas of the State for reasons of water pollution control. Such charges shall be based upon the damage done by such contaminants or to the cost of their control.[10]

The idea of charges, like the standing clause, remained intact throughout the three readings of the bill in the House. There were 38 proposed amendments to the bill in the House. Most were changes in syntax or typographical mistakes that did little to dampen the punitive aspects of the overall legislation. In Table 28 the chronological history of the bill as it went through the House is presented. The bill passed the House on May, 14 with a vote of 129 yeas and 10 nays.

On May 15, 1970 the bill, as approved by the House, was referred

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[8]Rep. George Burditt, personal intervies.

[9]H.R. 3788, Section 2, art. d, 2.

[10]Ibid., Section 13, art. g, 12.

TABLE 28

A BRIEF CHRONOLOGICAL HISTORY OF HOUSE DEBATES ON H.B. 3788, APRIL-MAY, 1970

Date	Action Taken
April 17	First reading. Executive Committee
April 29	Recommended do pass as amended
May 12*	Second reading. Amended--Amendments 2 through 22, 24 through 31, 33 through 35
May 13	Recalled to second reading. Amendments 17, 33, and 37 tabled. Amended--Amendment Number 36.
May 14	Recalled to second reading. Amended--Amendment Number 38. Third reading. Passed

*Amendments 1 and 3 were tabled in Committee. Amendment Number 23 was tabled. Amendment Number 32 was lost.

Source: State of Illinois, Legislative Synopsis and Digest: No. 8, (Springfield, Illinois: State of Illinois, 1970) p. 360.

to the Senate. A chronological history of the bill through the Senate is presented in Table 29. On May 19 the bill was up for its first reading before the Senate Executive Committee. At this time there were 72 amendments offered to the bill by representatives of the business community. These amendments were incorporated into the bill, for the most part, and presented on May 27 in Senate Amendment Number 1. (Senate Amendment Number 1 was the entire bill, rewritten.) Between May 19 and May 27, the content of the bill was considerably changed. The following quotations are some responses (given as examples of the sentiments) of some public leaders to the proposed (and later to be accepted) amendments.

Ralph Nader's response was recorded in the Chicago Tribune as follows:

> Nader charged industrial lobbyists of "amending to death" Governor Ogilvie's environmental protection bill.
> . . . . . .
> Many of the legislators who will vote against the bill have as their credo law and order and stamping out of violence. It's a shame they don't realize that environmental pollution also is a form of violence.[11]

Illinois Attorney General William Scott's opinion was:

> ...that preoccupation with campus violence has caused citizens attention to veer away from the Environmental Protection Act. Lobbyists from the petroleum industry, the steel industry, the Illinois Manufacturers Association...are taking advantage (of this preoccupation) and trying to kill the bill.[12]

A representative for the business community, Maynard P. Venama, spoke

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[11] "Nader Hits Lobbyists on Anti-Pollution Bill", Chicago Tribune, May 24, 1970, Section 1, p. 1.

[12] "Pollution Bill in Trouble, Scott Warns", Chicago Tribune, May 24, 1970, Section 1, p. 18.

TABLE 29

A BRIEF CHRONOLOGICAL HISTORY OF SENATE DEBATES ON H.B. 3788, MAY 15-MAY 28, 1970

Date	Action Taken
May 15	Senate Committee on Rules
May 18	Recommended order of First Reading
May 19	First Reading. Executive Committee
May 27	Recommended do pass as amended. Second Reading. Amended--Amendment Number 1
May 28	Recalled to Second Reading. Amended--Amendment Number 2. (Amendments 3 through 14 tabled.) Third Reading passed.

Source: See Table 28.

on behalf of various business associations.[13] His expressed desires were directed at three specific points of the bill. He wanted 1) to remove from the bill the standing clause; 2) to remove the pollution charges clause; and 3) generally to prevent agency action against polluters.[14] Mr. Venama felt the standing clause would "open the flood gates to already over flooded court dockets". David Currie's response to all of Mr. Venama's proposals was that such actions would "emasculate the bill". Responding to attempts to "emasculate the bill", David Currie stated:

> We have met repeatedly with these people (the industrialists). We have listened to their complaints. We have substantially weakened the private right for action the bill would create to protect the environment; we have agreed to eliminate the Board's power to prohibit out right the sale of such items as nonreturnable bottles; we have allowed variances for the burning of explosives wastes;...we have agreed to forbid multiple effluent charges we have preserved the jurisdiction of the Department of Mines and Minerals over oil well pollution; we have provided immediate judicial review of emergency administrative action; we have agreed to omit the requirement that air and water quality standards wholly eliminate health hazards; we have agreed to require the Board to consider economic and technological feasibility in setting standards.
>
> I think we have been most accomodating...but I think the bills as they stand will give us a basically sound program.
>
> But, we have been urged to accept a large package of additional amendments designed to eviscerate the whole program.[15]

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[13] Mr. Venama spoke at the Executive Committee hearings as a representative of the Illinois Chamber of Commerce, the Chicago Association of Commerce, the Illinois Manufacturers Association, Associated Employees of Illinois, and the Illinois Industrial Council.

[14] "Industry Asks 72 Changes in State Anti-Pollution Act", Chicago Tribune, May 26, 1970, Section 1, p. 3.

[15] Hearings before Senate Subcommittee.

On May 26, Governor Ogilvie warned:

> I think there is a concerted and conscious effort on the part of some industry representatives to cripple the legislation.[16]

The bill was rewritten on the 26th and was introduced for the first reading in the Senate as Senate Amendment Number 1. Mr. Thomas McGloon, Senate Minority Leader from Chicago, accused the Ogilvie administration of "selling out" to industry by incorporating the 72 amendments.[17] He said, "...the right of every individual to a clean, healthful environment has been curtailed." "You (Governor Ogilvie) have yielded to pressures and sadly diluted the bill."[18] David Currie answered Senator McGloon's accusations by saying "...negotiations were held last night (May 26) with industry spokesmen to narrow the areas of controversy, eliminate matters not important, and compromise matters not vitally important to the bill."[19]

The bill was formally amended two times in the Senate and passed after the third reading on May 28, 1970. The bill as accepted on the 28th excluded the standing clause, the charges clause, and the requirement that industrialists pay for and install monitoring devices, and other points considered as important by Currie in his May 25 testimony to the Senate. A Chicago Sun Times article on May 29 quoted David Currie as saying that he was "quite happy" with the bill and that it exceeded his

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[16]"Ogilvie Threatens Special Session", Chicago Tribune, May 27, 1970 Sec. 1, p. 4.

[17]"Illinois Senate Committee OK's Compromise Anti-Pollution Bill", Chicago Tribune, May 28, 1970, Sec. 1, p. 1.

[18]Ibid.

[19]Ibid.

expectations.[20]

The bill was signed into law by Governor Ogilvie on May 30, 1970. It was to take effect immediately. On July 1, 1970 the PCB and the EPA officially came into being. Since that time there have been several amendments offered to the bill to reinstate some of those clauses removed by Senate Amendment Number 1. The most comprehensive of these amendments was H.B. 2656. It was introduced on April 30, 1970 by State Representative Berman. This amendment, had it been adopted, would have reinstated the standing clause, the charges clause, the disposable container clause and the monitoring device clause.[21]

In summary, H.B. 3788 was introduced on April 17, 1970. Its purpose was to create a tripartite agency structure to abate and control pollution in the state. Between the bill's introduction in the House in April and its final passage in the Senate in May, the bill was amended 31 times in the House and 2 times in the Senate. One of the Senate amendments incorporated 72 amendments proposed primarily by industrialists. In the opinion of some it was watered down and in the opinion of others, the bill's central purpose was maintained throughout the legislative process.

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[20]"Amended Anti-Po-lution Bill", Sun Times, May 29, 1970, p. 32.

[21]House Bill 2656, 77th General Assemble, 1st Session (1971).

APPENDIX III

Tables summarizing fish kill data by year, location, type and number of fish, and cause of kill follow. Causes of the various kills are numerically coded by the federal government. These codes are presented in Table 26. Tables 27 through 28 present the fish kill data.

TABLE 30

CODE FOR CAUSES OF POLLUTION
FISH KILLS

Code	Cause	Code	Cause
10-19	Agriculture	30-39	Municipalities
11	Poisons (Herbicides, Pesticides, etc.)	31	Sewage Systems
		32	Refuse Disposal
12	Fertilizers	33	Water Systems
13	Manure, Silo, Feedlot drainage	34	Swimming Pool
20-29	Industry	35	Power
21	Mining	40-49	Transportation
22	Food and Kindred Products	41	Rail
		42	Truck
23	Paper and Allied Products	43	Barge and Boat
24	Chemicals	44	Pipe Line
25	Petroleum	50	Other
26	Metals	90	Unknown
27	Combinations		
28	Other		

Source: U.S. Department of Interior, Federal Water Pollution Control Administration, Pollution Caused Fish Kills, (Washington, D. C.: U.S. Government Printing Office, 1965) p. 26.

TABLE 31

FISH KILLS CAUSED BY WATER POLLUTION
BY LOCATION IN ILLINOIS, 1963

Location	Number of Fish	Type of Fish		Cause of Kill[a]
		% Game	% Forage	
Charleston	15,362	6	94	26
Charleston	40,837	29	71	26
Freeport	37,974	47	53	90
Granite City	10,141	84	16	26
Harristown	17,575	12	88	31
Hoopeston	42,114	38	62	22
Lincoln	16,355	3	97	31
Lincoln	34,795	4	96	90
Pittsfield	15,983	25	75	22
Rockford	30,907	54	46	90
Rockford	44,436	n/a	n/a	n/a
Rockford	51,404	11	89	31
Springfield	121,353	63	37	21
Sycamore	228,672	13	87	90
Wyoming	30,363	1	99	20
Other	68,007	20	80	*
Total State	805,278	22	78	

[a]Causes of kills are coded. The code is defined in Table 30.

*Other causes listed were 13, 35, and 24.

Source: Based on Illinois Pollution Caused Fish Kill Log for 1963 furnished by Mr. William Harth, Director, Fisheries Division, Illinois Department of Conservation, April, 1973.

TABLE 32

FISH KILLS CAUSED BY WATER POLLUTION
BY LOCATION IN ILLINOIS, 1964

Location	Number of Fish	Type of Fish		Cause of Kill[a]
		% Game	% Forage	
Fairmont	39,840	5	95	12
Grafton	3,536,536	n/a	n/a	n/a
Granite City	11,788	65	35	26
Hampshire	185,451	1	99	22
Illiopolis	88,704	29	71	31
Paxton	14,167	13	87	31
Plainsfield	15,260	n/a	n/a	n/a
Sheffield	29,812	1	99	22
Other	28,749	10	90	*
Total State	3,950,307	1	99	

[a]Causes for kills are coded. The code is defined in Table 30.

*Other causes listed were 31, 26, and 23

Source: Based on Illinois Pollution Caused Fish Kill Log for 1964 furnished by Mr. William Harth, Director, Fisheries Division, Illinois Department of Conservation, April, 1973.

TABLE 33

FISH KILLS CAUSED BY WATER POLLUTION
BY LOCATION IN ILLINOIS, 1965

Location	Number of Fish	Type of Fish		Cause of Kill[a]
		% Game	%Forage	
Columbia	15,856	100	-0-	32
Kincaid	146,902	72	28	44
Fairmont	107,145	1	99	24
Madison	26,837	2	98	90
Mt. Auborn	60,185	52	48	31
Milford-Watseka	41,833	30	70	22
Farmer City	16,039	12	88	35
Other	29,562	22	78	*
Total State	444,326	62	38	

[a]Causes for kills are coded. The code is defined in Table 30.

*Other causes listed were 13, 25, 42, and 90

Source: U.S. Department of Interior, Federal Water Pollution Control Administration, Pollution Caused Fish Kills, (Washington, D.C.: U. S. Government Printing Office, 1965) pp. 15 and 26; and a report furnished by Mr. William Harth, Director, Division of Fisheries of the Department of Conservation, April, 1973.

TABLE 34

FISH KILLS CAUSED BY WATER POLLUTION
BY LOCATION IN ILLINOIS, 1966

Location	Number of Fish	Type of Fish		Cause of Kill[a]
		% Game	% Forage	
Danville	291,181	1	99	31
Bondville	370,653	1	99	22
Poplar Grove	283,000	0	100	90
Ransom-Kinsman	224,886	0	100	90
Royaltown	104,091	1	99	21
Rock City	24,359	0	100	22
Other	33,356	28	72	*
Total State	1,331,526	1	99	

[a]Causes of kills are coded. The code is defined in Table 30.

*Other causes listed were 13, 41, 90.

Source: U.S. Department of Interior, Federal Water Pollution Control Administration, Pollution Caused Fish Kills, (Washington, D.C.: U. S. Government Printing Office, 1966) pp. 12 and 17.

TABLE 35

FISH KILLS CAUSED BY WATER POLLUTION
BY LOCATION IN ILLINOIS, 1967

Location	Number of Fish	Type of Fish		Cause of Kill[a]
		% Game	% Forage	
Danville	12,541	4	96	31
Junction	43,073	19	81	21
Milledgeville	13,799	0	100	10
Muncie	10,838	26	74	13
Purdueville	15,955	6	94	90
Rock City	47,731	1	99	22
Other	16,625	9	81	90
Total State	160,562	9	81	

[a]Causes for kills are coded. The code is defined in Table 30.

*Other cases listed were 24, 44, and 90.

Source: U. S. Department of Interior, Federal Water Pollution Control Administration, Pollution Caused Fish Kills, (Washington, D. C.: U. S. Government Printing Office, 1967) pp. 12 and 16.

TABLE 36

FISH KILLS CAUSED BY WATER POLLUTION
BY LOCATION IN ILLINOIS, 1968

Location	Number of Fish	Type of Fish		Cause of Kill[a]
		% Game	% Forage	
Fiatt	9,690	10	90	21
Galva-Bishophill	22,578	6	94	31
Granite City	211,872	8	92	24
Princeville	23,531	19	81	22
Rock City	53,500	1	99	22
Rock Falls - Harmon	25,884	1	99	44
Standard City	14,400	41	59	21
Sycamore	17,358	4	96	90
Other	1,225	20	80	*
Total State	379,107	9	91	

[a]Causes of kills are coded. The code is defined in Table 30.

*Other causes listed were all 21.

Source: U.S. Department of Interior, Federal Water Pollution Control Administration, Pollution Caused Fish Kills, (Washington, D.C.: U.S. Government Printing Office, 1968) pp. 11 and 16.

TABLE 37

FISH KILLS CAUSED BY WATER POLLUTION
BY LOCATION IN ILLINOIS, 1969

Location	Number of Fish	Type of Fish		Cause of Kill[a]
		% Game	% Forage	
Anchor	5,691	n/a	n/a	n/a
Castleton	24,622	n/a	n/a	n/a
Cedarville	31,384	1	99	12
Deer Grove	3,006	n/a	n/a	n/a
DeKalb	12,626	n/a	n/a	n/a
Harrison-Rockton	173,000	n/a	n/a	n/a
Paris	5,963	5	95	11
Paris	5,005	38	62	31
Princeville	14,409	6	94	22
Standard City	4,388	41	59	21
Sullivan	5,905	n/a	n/a	n/a
Urbana	10,904	41	59	22
Villa Grove	6,759	n/a	n/a	n/a
Total State	313,642			

[a]Causes of kills are coded. The code is defined in Table 30.

Source: Based on Illinois Pollution Caused Fish Kill Log for 1969 furnished by Mr. William Harth, Director, Fisheries Division, Illinois Department of Conservation, April, 1973.

TABLE 38

FISH KILLS CAUSED BY WATER POLLUTION
BY LOCATION IN ILLINOIS, 1971

Location	Number of Fish	Type of Fish		Cause of Kill[a]
		% Game	% Forage	
Abingdon	23,856	2	98	90
Champaign	24,215	36	64	50
Christian County[b]	13,165	14	86	90
Colfax	63,920	3	97	90
DeKalb	11,661	1	99	90
Ford County[b]	17,186	3	97	12
Genoa	57,671	2	98	90
Jersey County[b]	14,245	20	80	90
Kankakee	17,020	11	89	24
Kankakee County[b]	10,793	1	99	24
Mendota	26,060	0	100	22
Minooka	22,843	1	99	90
Rock Falls	98,945	42	58	26
Other	24,605	18	82	*
Total State	426,185	16	84	

[a]Causes of kills are coded. The code is defined in Table 30.

[b]Only county data available.

*Other cause listed was 50.

Source: Based on Illinois Pollution Caused Fish Kill Log for 1971 furnished by Mr. William Harth, Director, Fisheries Division, Illinois Department of Conservation, April, 1973.

TABLE 39

FISH KILLS CAUSED BY WATER POLLUTION
BY LOCATION IN ILLINOIS, 1972

Location	Number of Fish	Type of Fish		Cause of Kill[a]
		% Game	% Forage	
Champaign	62,646	12	88	25
Decatur	16,028	3	97	31
Heyworth	30,281	6	94	13
Huntley and Union	12,448	29	71	12
Milford	59,242	2	98	90
Other	36,842	71	39	*
Total State	217,487	19	81	

[a]Causes of kills are coded. The code is defined in Table 30.

*Other causes listed were 21 and 23.

Source: Based on Illinois Pollution Caused Fish Kill Log for 1972 furnished by Mr. William Harth, Director, Fisheries Division, Illinois Department of Conservation, April, 1973.

APPENDIX IV

The discussion in Chapter V is partially centered around the enforcement actions of the Illinois Pollution Control Board (PCB) based on the 1970 Act. Each PCB case concerning water pollution was reviewed in detail and summarized by the writer. The summaries are presented in the following pages. The time period covered extends from the Board's creation in July, 1970 to the end of Fiscal Year 1972, June, 1972.

The summaries are indexed by "hearing number" and "title of case". The first two digits of the hearing number indicate the year in which the hearing was held and the remaining digits indicate the hearing number within a given year. For example, 72-128 would indicate the 128th hearing by the Board in 1972. The hearings are summarized in numerical order except wherein non sequential hearings were considered together. For example, PCB 72-14 and 72-22 were considered and ruled on at the same time. PCB 72-15 was ruled on after these two. In the summary the former two are considered together and the latter follows. The date below each of the hearing numbers indicates the date on which the Board issued an opinion. Where there is more than one date, the Board issued separate opinions on each date. Each separate opinion is noted in the discussion of the cases. At the end of this Appendix, there is a table containing a list of all PCB hearings in chronological order by date.

OPINIONS DECIDED

July 1, 1970 - December 31, 1970

PCB 70-7 League of Women Voters v. North Shore Sanitary District
(10-8-70)
(3-31-71)
(4-14-71)
(5-12-71)
(6-9-71)
(7-12-71)

The Illinois League of Women Voters filed a complaint with the PCB alleging that the Chicago area North Shore Sanitary District (NSSD) was polluting Lake Michigan. The League charged that the NSSD had not met the Sanitary Water Board water quality standards set forth in SWB-7. Because of this failure, harmful residuals had been passed into the waters of Lake Michigan, causing among other things, the closing of public beaches. The Board found the charges to be valid and ordered the NSSD to: 1. cease and desist water pollution, 2. cease and desist air pollution (the emission of obnoxious odors from the district's treatment plants), 3. issue general obligation bonds in an amount pursuant with the construction needs of the district, 4. use whatever means possible to raise the funds necessary to perform the required projects, 5. present the Board, within 30 days of the order, with a complete expansion plan for the district's treatment plants in accordance with the findings of the order, 6. proceed immediately with the proposed expansion plan presented in 5 above, and 7. refuse to allow any new or additional connections to the current sewer system.

PCB 70-8 Environmental Protection Agency v. Village of Glendale Heights
(2-17-71)

The EPA filed a complaint against the Village of Glendale Heights alleging the dumping of raw sewage into the DuPage River. The Board found the EPA charges to be valid and ordered the village to: 1. cease and desist further water pollution, 2. construct new sewage treatment facilities, 3. issue general obligation bonds, 4. ban new connections to the existing sewer system, and 5. adopt a new compliance schedule.

PCB 70-10 Environmental Protection Agency v. Truax-Traer Coal Co.
(2-17-71)
(7-26-71) and Consolidated Coal Co.

The EPA filed a complaint alleging that the two companies polluted the waters of the Little Muddy River and the Big Muddy River from May 25, 1970 through June 3, 1970. The companies admitted guilt. The Board held, however, that the potential for pollution still remained in the area and held the hearing open for the possible issuance of a cease and desist order in the event of further pollution violations. The Board further ordered the companies to: 1. pay a penalty of $3,750 for the value of fish killed, and 2. submit a proposal within 30 days to abate and control further pollution possibilities. On July 26, 1971 the Board ordered that the hearing be closed on the basis of an EPA statement to the effect that the companies were acting in good faith to abate and control further pollution episodes.

PCB 70-12 Facktor,et al. v. North Shore Sanitary District (NSSD)
(3-31-71)

Mrs. Loraine Factor, Mr. and Mrs. Emanuel Winston and Mr. and Mrs. Paul Brown (representing the Committee to Save Highland Park - a group organized within the NSSD) joined with the League of Women Voters in alleging the inadequate treatment of sewage by one of NSSD's 5 treatment plants — the Clavey Road treatment plant. Near the completion of the case (PCB 70-7, discussed above, and PCB 70-12) Mrs. Facktor, et. al. withdrew these specific charges. The Board refused to recognize the withdrawal and held that these charges would be considered and passed upon. See PCB 70-7, above, for a complete listing of the Board's orders.

PCB 70-16 Environmental Protection Agency v. Allied Mills Inc.
(3-3-71)

The EPA filed a complaint against the Taylorville, Illinois plant of Allied Mills, alleging pollution of a tributary of the South Fork of the Sangamon River. The EPA sought a money penalty and a cease and desist order. Allied Mills answered the complaint with a consent order accepting liability for spillage of soy bean oil wastes into the river and agreed to pay damages. The Board's order was to: 1. pay a penalty for polluting the waters in the amount of $2,000, 2. file a petition of variance and plan to prevent future episodes, and 3. cease and desist bypassing waters from the storm sewer system in Christian County, Illinois.

PCB 70-18 Environmental Protection Agency v. Container Stapler
(3-3-71) Corporation, Federal Wire Mill, and City of Herrin

The EPA alleged that the two corporate respondents caused water pollution by discharging cyanides and cyanogen compounds into the sewer system of

the city of Herrin. The EPA further alleged that the city of Herrin " . . . caused and allowed pollution by discharging contaminants and increasing the quantity and strength of contaminants into the waters of the State of Illinois. . ." All charges against the city of Herrin were dropped because it was not clear that dangerous amounts of cyanide were found in the city's sewer system effluent. As regards the corporations, the Board's order was: 1. to cease and desist water pollution, 2. to abate and control the pollution, and 3. to monitor the water quality issue reports to the EPA every two months relative to the effectiveness of the abatement program.

PCB 70-32 (1-27-71) Springfield Sanitary District v. Environmental Protection Agency

The Springfield Sanitary District filed for a 30 day variance with the EPA to discharge 10 million gallons of raw sewage daily into Spring Creek. This would allow the district time to repair a ruptured interceptor sewer line. The district estimated the repair costs at $67,000 and noted that it would cost an additional $75,000 if the variance were not granted. It was the opinion of the PCB that the damage to Spring Creek over such a 30 day period would far outweigh the supposed economic hardship on the district by incurring the additional $75,000. The Board refused the variance and ordered, if necessary, the sale of general revenue bonds by the district to cover the additional costs.

PCB 70-35 (10-14-71) John Juergensmeyer v. Fox Valley Grease Blencing Co.

A citizen complaint was filed, with supporting evidence provided by the EPA, alleging water pollution of the Popular Creek tributary of the Fox River, by the Fox Valley Grease Blending Company. The EPA recommended a money penalty of $3,000. The Board found the complaint to be warranted and ordered the company: 1. to file for a variance with the EPA, and 2. to pay the State of Illinois $3,000 for damages.

PCB 70-38 (5-3-71) Environmental Protection Agency v. Modern Plating Corporation

PCB 71-6 Modern Plating Corporation v. Environmental Protection Agency

The EPA charged the Modern Plating Corporation with water pollution of the Pecatonica River by the discharge of cyanide, zinc and other matter. The episode in question occurred between October 3, 1967 and the date of the filing of this complaint, March, 1971. During the proceedings, the respondent raised questions as to the constitutionality of the Environmental Protection Act's enforcement arrangements, allowing for an administrative tribunal. The Board answered each point raised and set those questions aside. In reviewing the facts of the EPA charges, the Board found the EPA to be warranted and ordered the company to: 1. cease and desist the discharges of cyanide from both company plants into the River

and 2. pay a money penalty of $5,000.

In response to the EPA charges the company filed a petition for a variance from the Water Quality Standards of the SWB. The variance was to last from March, 1971 through September, 1971. The basis for the request was that adequate treatment facilities being constructed by the plant were near completion. On the basis of the facts involved in the request and the progress being made, the Board granted the variance with the following conditions: 1. the respondent should pursue with diligence the construction of its waste treatment plant subject to the plans and specifications identified in the variance petition, 2. upon completion of the plant's treatment facilities the respondent should cause connection of the new system to the village of Freeport Sewer System, 3. during the period of construction the respondent should continue to use current production techniques as efficiently as possible to further prevent the discharge of cyanide, 4. the respondent should post a performance bond of $550,000 to guarantee completion of construction of the facilities. In addition the petitioner should post a further bond in the amount of $50,000 to guarantee payment of further money damages caused by the respondent in the event of further cyanide pollution, and 5. during the period of the variance the respondent should not increase the volume of its pollutional discharges.

PCB 70-39 Environmental Protection Agency v. John T. Laforge Company, Inc.
(5-3-71)
PCB 71-18 John T. Laforge Company, Inc. v. Environmental Protection Agency

The EPA charged the John Laforge Company with water pollution of the Pecatonica River by the discharge of "certain organic matter" from the company's rendering operations. The duration of the violation in question was from August, 1967 to the filing of the current complaint, March, 1971. The Board concluded that the allegations were warranted and ordered the company to: 1. cease and desist its pollution discharges and 2. pay money penalty of $1500 for violation of the Sanitary Water Board's Rules and Regulations.

In response to the EPA allegations the company filed a variance petition relating to the Water Quality Standards. They questioned the appropriateness of applying the Water Quality Standards, during the time period that proper treatment facilities were being installed by the company. The Board felt after considering the facts that the variance was warranted and granted such with the following conditions: 1. the respondent should complete on or before May 28, 1971 construction of an effluent lagoon to accommodate one half hour retention of its effluent discharge subject to the plan and specifications to be approved by the Environmental Protection Agency and provide chlorination to assure compliance with the effluent limitations, 2. the respondent should diligently pursue its program of construction of a sewer line to connect with the Burgess Cellulose sewer line which will, in turn, connect into the sewage treatment facilities of the city of Freeport, 3. the respondent should post with the Environmental Protection Agency a

performance bond in the amount of $25,000 which shall be forfeited to the State in the event that the respondent continues the operation of its current plant after October 8, 1971 which is the deadline for this variance, and 4. the respondent should report to the Board and to the Agency when it had installed its chlorination facilities. It was noted that violation of any of the foregoing terms would result in a revocation of the variance.

PCB 70-45 (3-17-71) Malibu Village Land Trust v. Environmental Protection Agency

The Malibu Village Land Trust operates a trailer park in Carbondale, Illinois. They submitted a petition for variance from the compliance dates for design capacity requirements set by the Sanitary Water Board. The variance requests indicated the work in progress would be completed by July of 1971. On the basis of evidence offered, the Board granted the request with the following conditions: 1. By April 15, 1971 Malibu Village Land Trust should submit to the EPA plans and specifications for the above mentioned improvement, 2. On July 31, 1971 Malibu Village Land Trust should have completed construction of and have in operation a three stage lagoon or a mechanical aeration system for treating the sewage of 120 mobile homes, 3. no mobile homes should be added to the park until the Malibu Village Land Trust was in compliance with the design criteria of the Sanitary Water Board as listed in SWB-1., 4. Malibu Village Land Trust should post with the EPA a personal bond or other performance bond in the amount of $5,000 which would be forfeited to the State of Illinois in the event that the specified treatment facilities remain overloaded beyond design capacity after July 31, 1971, 5. Malibu Village Land Trust should pay to the State of Illinois money penalties of $100 for violation of the Statutes, and 6. the failure of Malibu Village Land Trust to adhereto any of the conditions of the order would be grounds for revocation of the variance.

PCB 70-47 (2-8-71) City of Carlinville v. Environmental Protection Agency

The city filed a petition, for a variance from the deadlines for the submission of plans, for sewage treatment facilities under Sanitary Water Board Rules and Regulations SWB-14. The Board dismissed the case on the basis that the city failed to submit information adequate for granting such a variance.

PCB 70-55 (3-31-71) City of Springfield v. Environmental Protection Agency

The city filed a petition for variance from the compliance dates for meeting the Water Quality Standards set by the Sanitary Water Board. The variance was requested on the basis that the treatment plant in question was to be connected with the Springfield Sanitary District, and that the plant's effluent would then be diverted to a larger central treatment facility. It was indicated that this larger treatment facility would be adequate to handle the waste from the smaller plant in question. On the basis of

the evidence given the variance was granted with the following conditions: 1. the city of Springfield should pay to the State of Illinois a money penalty of $1,000 for "gross violation" of the existing regulations, 2. during the period of the variance the effluent of the treatment plant in question should be brought into full compliance with all applicable regulations, and 3. plans for the construction of facilities to divert the effluents of the plant in question, to an alternate treatment site should be submitted to the EPA by August 1, 1971.

PCB 70-56 (5-26-71) Tekton Corporation and Gallagher and Henry v. Environmental Protection Agency

The respondents filed a petition in December, 1970 for a variance from the state's water quality standards compliance dates. On May 14, 1971 the Board recorded a letter requesting withdrawal of the petition, on the basis of an agreement having been reached between both parties. On this basis the Board chose to dismiss the case without prejudice.

Opinions Decided

January 1, 1971 - December 31, 1971

PCB 71-8 (4-14-71) City of Mattoon v. Environmental Protection Agency

The city filed a petition for a variance from the treatment plant construction deadlines set in Sanitary Water Board Rules and Regulations, SWB-14. According to the Board's written opinion the city had 1) claimed economic hardship, 2) claimed problems in dealing with design engineers, 3) claimed difficulty in determining and arranging financial needs to meet the obligations and 4) claimed it did not think that the state was serious when it developed construction deadlines. In reviewing the city's petition, the Board noted the city as being a "flat and inexcusable violation of its obligations under SWB-14". The Board ordered the city to: 1) submit final construction plans to the EPA by September 1, 1971, 2) complete the construction of facilities underway at the time of the hearing, 3) post a performance bond in the amount of $10,000, 4) issue revenue bonds in an amount necessary to complete the project, and 5) refuse connections to the city's sewage system of any new sewers or "other sources of waste."

PCB 71-11 (4-19-71) GAF Corporation v. Environmental Protection Agency

A variance petition was filed by the company to allow the discharge of wastes in excess of the amounts allowed by the SWB's Water Quality Standards. The variance petition further requested an extention on the deadlines set by the Sanitary Water Board for the completion of secondary treatment operations. In the hearing, the Board argued that the company had made no progress at all. The Board indicated that the company had been "dilatory"in meeting water quality standards. The Board ordered GAF: 1. to submit, before

June 19, 1971 a supplemental petition together with supporting information containing a firm program for reducing lead discharges to acceptable levels, 2. to have its contractors work 16 hours each day, 7 days each week to complete the primary and secondary treatment facilities; to have completed construction plans; to have obtained all leases; and to have permits and begun construction of the secondary facilities by June 19, 1971, 3. to post a performance bond in the amount of $2,600,000 to be forfeited if the condition previously listed were not met, 4. to pay the State a sum of $10,000 plus $1,000 per day for each day from December 1, 1970 to the present date as a penalty for failure to commence construction of secondary treatment facilities by the deadlines extended in the Statutes (The total amount of this penalty was $149,000.), 5. to not increase the pollutional nature of this discharge either in strength or volume, and 6. to take whatever measures feasible short of curtailing production to reduce its pollution of the DesPlaines River during the period of the construction of the primary and secondary treatment facilities.

On June 17 the company submitted a supplemental petition asking that the variance granted in April be extended with the new deadline being April, 1972. The Board granted a 90 day extension on the basis that some progress had been made since the original order. Mr. Dumelle of the Pollution Control Board filed a desenting opinion stating that the conditions of the original Board order had not been met and no variance should have been granted in this latter case.

PCB 71-19 (6-23-71) Spartan Printing Company Division World Color Press, Inc. v. Environmental Protection Agency

The Spartan Printing Company filed a petition for variance from construction completion dates set under Sanitary Water Board Rules and Regulations. The EPA recommended approval of the variance, while stipulating specific conditions. The case centered around chemical polluents from a printing operation, and ink pollution from a laundry operation. The company took six years in complying with the Sanitary Water Board and EPA requirements. The Board in reviewing the circumstances felt there were some unjustifiable delays made by the company in meeting water quality standards. But accepted EPA recommendations to approve the variance. Spartan Company was ordered: 1. to install phase I of a new treatment system by July 1, 1971, 2. to install phase II of the operation by March 30, 1972, 3. to pay a money penalty to the State of Illinois in the sum of $10,000, 4. to post with the EPA a performance bond in the amount of $200,000 to be forfeited if the conditions of phase I and phase II as noted above were not met, 5. to not increase the pollutional nature of the company's discharges during the period of variance and 6. to file with the Board and the Agency periodic progress reports on September 30, 1971, December 30, 1971, and March 30, 1972.

A desenting opinion was filed by Mr. Dumelle of the Pollution Control Board

stating that the money penalities in this case were too low. On June 29, the Spartan Printing Company filed a petition for an extension in the completion date for phase I listed above. This request was made on the basis of construction delays met in laying the foundation for the treatment plant. The Board felt that adequate progress having been made, that the extension should be granted without any forfeiture of the performance bond as specified above.

PCB 71-21 (5-12-71) City of Lake Forest v. Environmental Protection Agency

The city of Lake Forest filed for a variance from the North Shore Sanitary Districts sewer ban. The variance involved the immediate connection of 27 single family dwellings to the city's snaitary sewer. Between the time this motion was filed with the Board and the Board's review of the request, the EPA granted the permits to connect. Given this consideration the Board found the case to be moot and it was dismissed.

PCB 71-23 (5-24-71) Environmental Protection Agency v. Borden Chemical Company

Borden filed for variance to the Sanitary Water Board's "effluents standards plan completion date". Borden wanted to study the extent of the treatment the waste of the company should receive, in order to meet these SWB standards. Given the evidence presented by the company, EPA recommendations, and the past record of the company in dealing with such matters, the Pollution Control Board felt the variance was warranted. The company was ordered: 1. to meet the following time table for the construction of advanced waste treatment facilities as required by Paragraph 11B, Section 1.08, SWB-14; a. completion of plans and specifications by October 31, 1971, b. awarding a construction contract by February 1, 1972, and c. completion of construction by July 1, 1972, and 2. to not increase production so as to increase average strength, concentration, and volume of the waste water, during construction of facilities specified above.

PCB 71-25 (5-12-71) Environmental Protection Agency v. The City of Marion

The Agency charged the city of Marion with water pollution from its sewage treatment plant. In reviewing the charges the Board felt that the information given by both sides, the EPA and the City, was inadequate. The decision of the Board was to schedule a regular hearing. The hearing was held June 30, 1971. At this time the city entered evidence to demonstrate adequate performance toward meeting the required SWB Standards. In response to this, however, the EPA filed some points of disagreement. The Board felt the variance was warranted and ordered the City to: 1. comply with Sanitary Water Board Standards by September 30, 1972, 2. advertise for bids for construction of the facilities by December 30, 1971 and complete the operation of the facilities by September 30, 1972, 3. make every responsible

effort to complete the facilities for storm water bypasses by July 31, 1972, 4. post a performance bond of $100,000 to assure compliance of the terms listed above, 5. pay the money penalty $100 to the State of Illinois for violations of the Sanitary Water Board Rules and Regulations SWB-14, and 6. within 60 days after receipt of the order, submit to the Agency and to the Board, a plan assuring the financing of the program together with a study by bond council discussing the various financing alternatives available. In response to the Board's order the city filed a "Motion for Stay" asking a Stay pending appeal of posting the performance bond required by the above Board order. This request was granted.

PCB 71-26 (7-8-71) Environmental Protection Agency v. City of East St. Louis

The EPA filed a complaint against the city of East St.Louis alleging the pollution of the Mississippi River, and the operation of the city's sewage treatment facilities under the supervision of an uncertified plant operator. The Board found the Agency's allegations to be warranted and ordered the city to: 1. place the treatment operations under the supervision of a certified plant operator, 2. repair a broken sedimentation tank by August 15, 1971, 3. cease and desist pollution of the Mississippi River, 4. pay a money penalty of $200 to the State of Illinois, and 5. file a progress report with the Agency by September 1, 1971. (The money penalty of $200 was assessed by the Board in the face of a recommended fine by the EPA of $6,000. The Board's justification for the lower penalty was that the city was "poverty-striken". and unable to afford a penalty of $6,000.)

PCB 71-34 (3-3-71) ENACT v. State Boys' School

A citizen's group, ENACT, filed a complaint alleging the discharge of raw sewage, by State Boys' Farm, into the waters of Giant City State Park, Carbondale, Illinois. State Boys' Farm is a state agency. The Board hastened to commend the group for its concern, but noted that the complaint was not filed in proper form in accordance with PCB Rules and Regulations. Pertinent information pertaining to procedural rules was sent to the group by the Board. The group was told that they could file the claim again once they had complied with the Board's wishes.

PCB 71-36 (6-9-71) (3-7-72) (3-28-72) North Shore Sanitary District v. Environmental Protection Agency

NSSD petitioned for a variance from the PCB Phosphorus Water Standards, R 70-6, and Sanitary Water Board water quality standards, SWB-7. The variance was requested for a period of one year. Inasmuch as no program for specific action was filed with the petition, the Board denied approval.

On January 3, 1972, the Board's decision was reversed by the Appelate Court of the Second District. The court noted that "the Board based its decision upon matters which are not within the record (of the proceedings)." Initially, the Board did not interpret the reversal as being a grant of the requested variance. It was felt that even though the court rendered no opinion with its decision, other than that quoted above, the reversal was on the basis of a legal technicality and not related, in a real sense, to the Board's decision. At this point the Board reviewed the evidence on both sides. The district was not able to defend the position that continued dumping of current levels of phosphate would not significantly affect Lake Michigan. On the basis of an inadequate defense of the district's position, the Board upheld its earlier opinion. On March 28, 1972, the Board reversed its opinion on the basis of an amended order from the Appelate Court. The Board dismissed the case.

PCB 71-37 (3-22-71) Decatur Sanitary District v. Environmental Protection Agency

The Decatur Sanitary District filed a petition for a one-year extension in conforming with SWB water quality standards, SWB-14 requirements for the construction of tertiary treatment facilities. The petition did not contain the information required by the Board for such a request and the petition was dismissed.

PCB 71-40 (3-22-71) Department of Public Works and Buildings v. Environmental Protection Agency

The Department filed a petition for a variance from the compliance dates set by the SWB for submitting plans for upgrading sewage treatment facilities. The petition did not have information adequate for the Board to make a decision. The petition was dismissed.

PCB 71-51C (11-29-71) Environmental Protection Agency v. City of Champaign, Illinois, et. al.

The EPA alleged violation of the State's water quality standards on eight occassions by the city of Champaign, Illinois. The city, in turn, enjoined the University of Illinois as the cause of two of the violations and the Alpha Material and Fuel Company as the cause of three of the violations. All three respondents filed motions to dismiss the case, questioning the constitutional authority of the Board in acting as a tribunal. In all three cases, question was answered and dismissed as irrelevant. The Board, after reviewing the evidence offered in the case, found the complaints of the Agency

to be warranted and ordered the respondents to comply with the water quality standards as follows: 1. The city was ordered to conduct surveilance of Boneyard Creek and submit reports of the creek's conditions to the EPA. The city was further ordered to furnish the Agency and the Board with a detailed abatement program for preventing further pollution of the creek. 2. The university was ordered to file a program detailing corrective measures to be taken on its behalf to abate water pollution, and 3. Alpha Material and Fuel Company was ordered to cease and desist the discharge of contaminants into the creek.

PCB 71-68 Flintkote Company v. Environmental Protection Agency
(11-11-71)

The Flintkote Company requested a variance from SWB water quality standards SWB-9. The basis for the request was that the company had been negotiating with the city of Mr. Carmel to connect to the city's treatment plant since 1968. No contract had been signed as of November 1971. The company did not, however, accompany the petition with a positive program in the event of approval of the variance. On the basis of inadequate information, therefore, the case was dismissed.

PCB 71-72 Spraying Systems, Inc. v. Environmental Protection Agency
(7-6-71)
PCB 71-75 Pulte Land Corp. v. Environmental Protection Agency

The two respondents petitioned for a variance from the sewer ban placed on the city of Glendale Heights. (See PCB 70-8.) Spraying Systems Inc. wanted to connect its plant operations with the city. Inasmuch as the company would not need the use of treatment facilities before the city had planned completion of its improvements program, the petition was denied. The Pulte Land Corporation planned construction of an apartment complex. Inasmuch as the construction had not begun prior to the issuance of the sewer ban, the petition was denied.

PCB 71-77 Fred Wachta and J. Rochard Mota v. Environmental Protection
(7-12-71) Agency

The two respondents requested a variance from the NSSD sewer ban. (See PCB 70-7.) The variance was needed to connect 26 new dwellings to the NSSD sewer system. Since 7 of the 26 structures were under construction prior to the ban order, these 7 were allowed to connect. As regards the remaining 19 dwellings, the Board asked the respondents to seek alternative treatment sources.

PCB 71-80 Robert H. Monyek v. Environmental Protection Agency
(3-14-72)

Mr. Monyek requested a variance from the NSSD sewer ban. A Board ruling

on March 2, 1972, PCB 71-343, allowed the District a blanket grant to permit 5,000 new connections. Because of this, Mr. Monyek was directed to file for permission to connect directly with the district. His case was dismissed.

PCB 71-83 (10-14-71) National Starch and Chemical Corporation v. Environmental Protection Agency

The company requested a variance from the State's effluent standards while a plan for adequate treatment facilities was developed. On the basis of the evidence given the variance was granted with the following conditions: 1. the company must meet the following schedule: a. February 18, 1972--complete the engineering design, b. April 14, 1972--begin construction of the facilities, and c. October 1, 1972--complete the construction, 2. make periodic reports of progress to the EPA, 3. pay $2,000 in money penalties to the state, and 4. post a performance bond of $75,000 to be forfeited if the above schedule was not met.

PCB 71-85 (7-26-71) Robert C. Wagnon v. Environmental Protection Agency

Mr. Wagnon requested a variance from the NSSD sewer ban to construct a home. Since hardship was not proven and construction of the home had not started when the ban was ordered, the variance was denied.

PCB 71-93 (6-28-71) Mrs. E. Allen Haight v. Environmental Protection Agency

Mrs. Haight requested a variance from the NSSD sewer ban to construct additional rooms, including a bathroom, to her home. Based on perpetual illness with one of the family members being considered a hardship by the Board, and inasmuch as there would be no net increase in the number of users, the variance was granted.

PCB 71-100 (8-5-71) John Ciancio and Margaret Ciancio, his wife v. Environmental Protection Agency

The respondents requested a variance from the NSSD sewer ban to connect a new home. The variance was granted. A dissenting opinion was offered by Mr. David Currie. The recommendation of the EPA was not to grant the variance. Mr. Currie felt that the Board did not have enough information concerning the Agency's opinion and felt the conflict should have been reconciled.

PCB 71-103 (8-5-71) (9-7-71) Wallace W. Piroyan v. Environmental Protection Agency

Mr. Piroyan requested a variance from the NSSD sewer ban. His petition

was denied and he was directed to seek other alternatives if he chose. He filed an amended petition with additional information concerning his needs. The Board, however, did not change its ruling.

PCB 71-104 (5-12-71) Gages Lake Sanitary District v. Environmental Protection Agency

The Gages Lake Sanitary District petitioned for a variance on SWB deadlines for sewage treatment construction. The Board found that the petition was not accompanied with adequate information to make a decision. The Board left the matter open for the submission of additional information.

PCB 71-106 (8-13-71) Walter R. Seegren v. Environmental Protection Agency

Mr. Seegren requested a variance from the NSSD sewer ban, requesting the extension of the district's sewer lines to connect 2 eighteen unit apartment buildings. Septic systems were being used at the time of the hearing. Since there was alternative means available, the Board denied the variance. Dissenting opinions were offered by Board members Aldrich and Kissel. Mr. Aldrich argued that since the buildings were completed before the ban was issued, and since the septic tanks were merely a temporary means of dealing with the sewage, the petition should have been granted. Mr. Kissel's dissent was essentially the same as that of Mr. Aldrich.

PCB 71-107 (8-13-71) Howard Weinstein and Barbara Weinstein, his wife v. Environmental Protection Agency

PCB 71-122 Robert D. Charles v. Environmental Protection Agency

PCB 71-192 Bartolomeo Biondi and Caroline Biondi, his wife v. Environmental Protection Agency

All three respondents filed petitions for a variance from the NSSD sewer ban in order that they might connect (homes they were planning to build) with the NSSD system. Inasmuch as the houses were not constructed prior to the sewer ban issuance and no "true" hardship was indicated in any case, the petitions were denied.

PCB 71-109 Environmental Protection Agency v. Williamson County Housing Authority

The EPA alleged a violation of the 1970 Act by the Housing Authority. The Housing Authority failed to complete a three stage holding lagoon treatment system, for WCHA's apartments, under a permit granted by the SWB in February.

1969. The Board found the Agency's charges to be warranted and ordered the Housing Authority to: 1. submit to the Agency and the Board an affidavit to the affect that the wastes of the housing project were or were not being treated by the treatment facilities of the Village of Cope by November 1, 1971; 2. connect WCHA's sewage system with that of the village and cover the existing lagoon system; and 3. pay a money penalty of $500.

PCB 71-110 Monsanto Company v. Environmental Protection Agency
(11-8-71)

The company petitioned for a variance from the mercury emissions standards of the State. The petition was filed on the basis that the company was to develop a monitoring program during the variance period. The argument advanced in the petition was that current levels of mercury emissions were in limited amounts. The Board granted a variance for one year with the following conditions: 1. a maximum limit for mercury contents in the emissions was set; 2. the deadline of the variance was November 7, 1972; 3. the company was responsible for testing and giving additional treatment when necessary to wastes put into the village's sewage system; 4. the company had to submit periodic progress reports to the Agency; and 5. the company had to submit a report to the Agency of research being done to eliminate mercury from the production process.

PCB 71-111 The Sherwin-Williams Company v. Environmental Protection
(11-11-71) Agency

PCB 71-114 Graham Paint & Varnish Co., Inc. v. Environmental Protection Agency

PCB 71-115 General Paint & Chemical Company v. Environmental Protection Agency

PCB 71-116 Enterprise Paint Manufacturing Company v. Environmental Protection Agency

PCB 71-117 Armstrong Paint Company v. Environmental Protection Agency

PCB 71-118 Jewel Paint & Varnish Company v. Environmental Protection Agency

PCB 71-119 The Valspar Corporation v. Environmental Protection Agency

PCB 71-120 NL Industries, Inc. v. Environmental Protection Agency

The eight respondents petitioned for variance from the state's mercury standards passed effective March, 1971. The EPA filed, in each case, a Motion to Dismiss to try and block the variances from being granted. The EPA's opposition was joined by the Metropolitan Sanitary District of Greater Chicago. On the basis that each respondent proved to be well underway in abatement investigations and were seeking substitutes to mercury in their production processes, the Board granted the variances. With the approval, the Board stipulated that each of the respondents monitor its emissions to guarantee that excessive amounts of mercury were not released into the waters of the State, and to file periodic progress reports with regards to the research programs with the EPA.

PCB 71-112 Scott Volkswagen, Inc. v. Environmental Protection Agency
(8-13-71)

The respondent petitioned for a variance from the NSSD sewer ban, that would allow it to connect a new auto sales and service facility to a district treatment plant considered to be "overloaded". Hardship was not proven and construction of the facility had begun after the issuance of the ban. The Board denied the petition.

PCB 71-113 David S. McAdams v. Environmental Protection Agency
(8-13-71)

The respondent requested a variance from the NSSD sewer ban on the basis of hardship -- his family of four was living in a four room, one bedroom apartment, and he wanted to build a house to relocate. The new home that Mr. McAdams was desirous of building was to be constructed under the FHA-235 low income housing program. The Board felt justified in granting the petition since it represented an obvious hardship case.

PCB 71-123 Henry Hannah v. Minnesota Paints, Inc.
(8-5-71)

Mr. Hannah filed a complaint stating that during unloading of a truck filled with resin at the Minnesota Paints Company plant, an overflow occurred in one of the company's storage tanks. This overflow went into the storm sewer system of the city of Moline, Illinois thereby polluting Honey Creek. A consent order was filed with the Board by both parties--Mr. Hannah and the Company--offering a settlement of the case. The Board accepted the terms of the consent order as an adequate settlement for all parties. The consent order contained the following: 1. an admission of guilt for pollution by the company, 2. an agreement to pay $100 for fish killed in the episode, 3. a waiver of the consent order as being binding to both parties in the event of nonapproval by the Board, and 4. an agreement on behalf of the company to cease and desist future pollutional discharges.

PCB 71-126 (8-13-71) — Dole Construction Co. v. Environmental Protection Agency

The respondent filed for a variance from the NSSD sewer ban. A hearing was scheduled but the representative of the respondent failed to appear. The petition was dismissed.

PCB 71-132 (8-5-71) — American National Bank and Trust Company v. Environmental Protection Agency

The bank requested a variance from the NSSD sewer ban. The bank wanted to construct a 65 unit apartment building that would be connected to the existing sewage system. The variance was granted on the basis that construction of the structure had begun prior to the issuance of the ban. Board member David Currie filed a dissenting opinion. Mr. Currie held that the facts of this case were no different from those of the case, Wachta v. EPA, PCB 71-77, but that the decisions rendered by the Board were inconsistent.

PCB 71-133 (8-5-71) — Thomas Kaeding et. al. v. Environmental Protection Agency

Mr. Kaeding, et. al. requested a variance from the NSSD sewer ban. Inasmuch as there was no basis, i.e. hardship etc., the variance was denied the petition was dismissed.

PCB 71-136 (8-13-71) — Arthur H. Zamost v. Environmental Protection Agency

Mr. Zamost requested a variance from the NSSD sewer ban on the basis that a lot was purchased and plans begun for the construction of a house prior to the issuance of the ban. The Board held that since actual construction had not begun prior to the issuance of the ban, the variance should be denied. The petition was dismissed.

PCB 71-138 (9-16-71) — Western Land Planning Co. v. Environmental Protection Agency

The company requested a variance from the Wheaton Sanitary District sewer ban. Shortly after filing the petition, the company notified the Board it was withdrawing the request. The Board dismissed the case on the basis that no question remained.

PCB 71-149 (9-2-71) — Carrie F. Andracki, et. al. v. Environmental Protection Agency

Mr. Andracki, et. al. requested a variance from the NSSD sewer ban. Mr. Andracki wanted to build a new home and connect it to the existing sewage facilities. The petition was denied on the basis that justifiable cause was not proven.

PCB 71-151 Charles M. Hughes et. al. v. Environmental Protection Agency
(9-2-71)

Mr. Hughes, et. al. requested a variance from the NSSD sewer ban. A hearing was scheduled and the respondent failed to appear. The request was dismissed.

PCB 71-160 City of Pana v. Environmental Protection Agency
(8-13-71)

The city requested a variance on a deadline issued by the EPA for replacing the mercury seals on the trickling filters used in the city's sewage treatment plant. The EPA's deadline was set for June 30, 1971. The variance requested an extension until March 1, 1972. The Board was concerned that the EPA had, through its letter, set itself up as a rule making body and reinterpreted the tone of the EPA's letter to simply be a warning of possible action rather than a deadline. On this basis the Board gave Pana until March 1, 1972 to change the seals.

PCB 71-161 Patricia Development Corp. v. Environmental Protection Agency
(9-16-71)
(2-3-72)

The company requested a variance from the NSSD sewer ban. The company wanted to construct 23 new homes and connect them to the existing sewage facilities. A variance was granted for 18 of the structures on the basis that they were well under construction or completed upon the issuance of the ban. It was also noted that the houses were built under the federal mortgage assistance program for low income families. The Board felt that the damage incurred by increasing the districts sewage load would probably be offset by giving new homes to 18 low income families. On January 21, 1972 the company requested clarification with regards to two of the units covered in the above petition. The Board noted that one of the two parties in question was covered as part of the 18 variances granted above and the second could be considered as part of a blanket variance granted the district around the time of the request for clarification.

PCB 71-164 LaSalle National Bank of Chicago v. Environmental Protection Agency
(8-30-71)

The bank requested a variance from the sewer ban placed on the Danville Sanitary District on May 12, 1971. A Board order of August 13, 1971 allowed the District to connect up to 1500 P.E. (single users) without Board approval. The respondent was directed to apply directly to the Danville District for a permit to connect. The petition was dismissed.

PCB 71-168 American Distilling Co. v. Environmental Protection Agency
(9-27-71)

The company requested a variance from compliance with deadlines for treatment

plant construction set by the SWB. By the date of the hearing, the respondent had notified the Board that it was in compliance. The case was dismissed.

PCB 71-171 Richard S. Tauber v. Environmental Protection Agency
(8-5-71)

Mr. Tauber requested a variance from the NSSD sewer ban on the basis of hardship. Mr. Tauber had some unoccupied houses which he was desirous of connecting to the existing sewage facilities, so that he might rent them. He felt that houses allowed to set vacant for long periods of time were subject to "vermin and vandals". The Board concurred and granted the variance under thecondition that specific points of the petition be verified under oath. Board member David Currie filed a dissenting opinion. Mr. Currie felt that a vacant house should be considered the same as a house that was not built at the time of the ban. (Mr. Tauber's houses were vacant at the time the ban was issued.) On October 8, 1971 the order was made official when the questions left pending at the time of the decision were verified in line with the requirements listed above.

PCB 71-177 The Village of Warren v. Environmental Protection Agency
(9-30-71)

The village requested a variance from the State's construction deadlines for tertiary treatment plants. The village alleged that they currently were using secondary treatment, and additional land needed for the tertiary plant had to be obtained through condemnation. A variance of 120 days (until January 1, 1972) was granted with the following conditions: 1. the village acquire the property necessary to build the new plant, 2. the village submit a variance within 90 days which outlines the steps to be taken by the village in constructing the facilities, 3. the village post a performance bond in the amount of $150,000, and 4. pay money penalties for violations amounting to $200.

PCB 71-183 Metropolitan Sanitary District of Greater Chicago v.
(11-11-71) Environmental Protection Agency

The district requested a variance from the compliance dates under SWB-14. The Board noted that the plans required for compliance, due the previous year, had not been filed with the EPA. The district was responsible for presenting plans and other information to indicate positive action with the variance request. Since the district had not done so, the petition was dismissed.

PCB 71-190 Park Manor v. Environmental Protection Agency
(8-13-71)
(9-2-71)

Park Manor requested a variance from the NSSD sewer ban on the basis of

hardship. Park Manor expended a large amount of money just prior to the ban. The money went to purchase land and plan a nursing home. The land purchased for the construction of the home had an operating funeral home on it. The funeral home was to be torn down. This indicated that there would most likely not be a net increase in use of the district's facilities. On the basis of these considerations, the variance was approved subject to the verification of certain specific points. The verification was received on August 5, 1971 and the order was made official. A dissenting opinion was offered by Board member David Currie. Mr. Currie argued that precedent had been set with the Board, such that, the respondent had either to prove economic hardship or prove that construction had begun on new facilities prior to the issuance of the ban. He argued that neither of these conditions were met in the current case.

PCB 71-194 (8-2-71) Francis J. & Margaret J. Dupre v. Environmental Protection Agency

The Dupres requested a variance from the Danville Sanitary District sewer ban on the basis that construction of their home had begun before the issuance of the ban. On this basis, the variance was approved.

PCB 71-209 (9-30-71) Mr. & Mrs. Bill Lawler v. Environmental Protection Agency

The Lawlers requested a variance from the NSSD sewer ban. The respondents failed to show how they would suffer significant hardship if the variance were not granted. The variance was denied.

PCB 71-218 (10-26-71) Mars Development Co. v. Environmental Protection Agency

PCB 71-219 Marvin Wasserman, et.al. v. Environmental Protection Agency

The respondents requested a variance from the NSSD sewer ban. They wanted to construct 33 new homes and a department store and connect these dwellings to the existing sewage facilities. They alleged that they would construct four 10,000 gallon holding tanks for the new structures and release sewage into the District's system only during night hours. During the night demands on the sewage system is at its lowest point. The operation proposed above was alleged to work well in dry weather but it was noted that during wet weather its operation was questionable. In light with this latter consideration the variance petition was denied.

PCB 71-223 (10-28-71) City of Olney v. Environmental Protection Agency

The city of Olney requested a variance on the deadline date requirments of SWB Rules and Regulations concerning water quality standards established under order SWB-14. The city at the time of the hearing was operating a

secondary treatment plant. (The variance requested pertained to tertiary treatment facilities.) The Board found the variance to be warranted and granted it with the following conditions: 1. plans and specifications pertaining to the project would be submitted by January 1, 1972 and construction begun by April 1, 1972, 2. the city was to move as quickly as possible in installing the chlorination facilities for the effluents of the current operations, 3. the city must abate further pollution, and 4. periodic progress reports had to be made with the agency.

PCB 71-237 Environmental Protection Agency v. George Reeves, Jr.
(11-11-71)

The EPA filed a complaint against Mr. Reeves alleging a violation of the 1970 Act as it pertains to water supplies for residential development. The allegations were: 1. Mr. Reeves failed to submit plans of the water supply to the EPA for approval, 2. he failed to control the iron content of the water which at times exceeded the U.S. Public Health standards for iron contents, 3. he failed to provide proper chlorination to the water supply and 4. he failed to administer proper maintenance to the operation. The Board felt the charges were warranted and ordered Mr. Reeves to: 1. by November 1, 1971 file an affidavit to the effect that proper water treatment facilities were in operation, 2. by December 31, 1971 file an affidavit indicating Federal standards were being met, 3. pay money penalty of $3,000, and 4. cease and desist further violations of the 1970 Act.

PCB 71-246 Environmental Protection Agency v. Yetter Oil Company
(11-22-71)

The EPA filed a complaint against the company alleging the pollution of an unnamed tributary of the Troublesome Creek on April 16, 1971. The Agency further alleged that there were still signs of oil visible on May 6, and May 25. The company denied responsibility for the oil in the stream. The company, however, had noted a leak from one of its well operations on April 16. On the basis of the evidence filed by the Agency, the Board found the allegations to be warranted and ordered the company to: 1. cease and desist water pollution, and 2. pay a money penalty to the state of $500.

PCB 71-247 School Building Commission v. Environmental Protection Agency
(10-18-71)
(10-26-71)

The State School Building Commission filed a petition to receive a permit to connect a new high school building to the village of Flossmoor sewer system. The Agency had previously denied the permit on the basis that the village treatment plant was grossly overloaded. The commission argued that to deny the connection would "impose an unreasonable hardship on the students and others using the presently overcrowded school." The Board after considering the evidence granted the variance with the condition that the

school district do all possible to minimize its contribution to the sewer system.

PCB 71-253 Mrs. Susan Pena v. Environmental Protection Agency
(10-14-71)

Mrs. Pena requested a variance from the NSSD sewer ban. She wanted to move into a new federal mortgage assistance house and connect the dwelling to existing sewage facilities. Given the nature of the respondent's case--hardship, the petition was granted.

PCB 71-260 G. L. Miller Motor Sales, Inc. v. Environmental Protection
(9-7-71) Agency
(11-23-71)

Mr. Miller requested a variance from the NSSD sewer ban. He wanted to complete the construction of a new auto sales and service building and connect it to the existing sewage facilities. It was noted in the petition that the construction was under way when the petition was filed. It was not evident, however, that the construction was begun prior to the March 31 date of the sewer ban issuance. The hearing was postponed for clarification of this latter point. On November 23, 1971, the Board noted that the construction was begun after the ban was in effect. The petition was dismissed. Just prior to the date of the final opinion, however, the Board had granted a blanket variance to the district, i.e., PCB 71-343. Mr. Miller was referred to file for a connection permit with the district under this blanket variance.

PCB 71-266 Waukegan Park District v. Environmental Protection Agency
(9-16-71)
PCB 71-267 Lake County School District #64 v. Environmental Protection Agency

The two respondents requested a variance from the NSSD sewer ban. The Board dismissed the petition on the basis of inadequate information for making such a decision.

PCB 71-268 City of Flora v. Environmental Protection Agency
(10-28-71)
(11-1-71)

The city of Flora requested a variance to permit the bypassing of incompletel treated sewage during maintenance and repair of its treatment facilities. The EPA felt that the city's plant was so designed to allow this type of project to be facilitated without releasing inadequately treated sewage and recommended the petition be granted. The Board agreed and the final

order expressing the EPA's opinion was issued November 1, 1971.

PCB 71-269 (11-23-71) (2-17-71) (3-14-72) — Richard P. Glovka v. North Shore Sanitary District, Raymond E. Anderson, Thomas P. Kaeding, Alfred N. Bederman, Edward A. Holub, E.A. Horsch, Jr., Robert E. Nilles, Inc., North Shore Industrial & Research Centre, Village of Lake Bluff, Illinois, and John E. Murray

Mr. Richard Glovka filed a complaint against the above listed parties alleging that their actions threatened to cause water pollution in violation of Section 12 (a) and (c) of the 1970 Act. He further alleged that the NSSD violated its sewer ban. The district answered the allegations admitting the principal allegations but denying that it was guilty of violating the PCB sewer ban. The NSSD had allowed the village of Lake Bluff, Illinois to make connections to the village's sewer system which in turn connects to the NSSD system. Mr. Kaeding and Mr. Bederman were the two parties in this latter instance. The District Director, Mr. Anderson argued that the connections were authorized under permits issued prior to the sewer ban even though the connections had not been made prior to the ban issuance. The Board took the position that this violated the spirit of the March 31 ban. The Board found the allegations to be warranted and ordered: 1. the NSSD to cease and desist connections without approval of the Board, 2. to pay a money penalty of $5,000, and 3. to disconnect all "authorized" connections noted in the proceedings as violations. On March 14, 1972, the district requested a stay of enforcement of the above order pending appeal. The request was granted.

PCB 71-272 (12-9-71) — Environmental Protection Agency v. Soil Enrichment Materials Corporation

The EPA represented by the State Attorney General's Office alleged that the company caused water pollution on six separate occassions between February 22 and August 7, 1971. The Board felt the allegations to be warranted and ordered the company to: 1. pay a money penalty of $2,000, and 2. cease and desist from further pollution.

PCB 71-276 (12-13-71) — Zbigniew Cianciara v. Environmental Protection Agency

The respondent requested a variance from the NSSD sewer ban. He wanted to construct a new house and connect it to existing sewage facilities. The respondent failed to prove hardship and based on precedents, the petition was denied.

PCB 71-283 Environmental Protection Agency v. Percy Logan and Mrs. Humphrey Logan
(1-20-73)

The EPA charged the Logans with violating the 1970 Act by causing air pollution, water pollution, and land pollution, through open burning and maintaining inadequate refuse disposal facilities at "Logans Dump". The EPA and the respondent came to an agreement on the facts of the allegations prior to the Board's review of the case. The Board accepted these as being accurate and ordered the Logans to cease and desist the operation of the dump. The question of further penalties was held pending submission by both parties in this respect. The case was held open.

PCB 71-285 E.N. Maisel & Associates v. Environmental Protection Agency
(12-9-71)

The respondent filed a petition for a variance from the NSSD sewer ban, to allow him to construct a K-Mart Department Store and connect it to existing sewage facilities. He noted that he had made an agreement with the operator of a car wash on adjoining property, such that if variance were granted, the car wash would close its operation. On the strength of this agreement the Board granted the variance ordering the car wash owner to post a $50,000 security bond to insure compliance with the agreement. On March 14, 1972 Mr. Maisel requested clarification of the types of waste the company was allowed to dispose of. The Board noted that only "ordinary wastes" would be permitted. No wastes from the auto shop such as oils and grease, and floor drain runoff were permitted. Also, restaurant wastes should be treated by the use of properly installed and operated grease traps.

PCB 71-287 Village of Sauget v. Environmental Protection Agency
(12-21-71)
(1-31-72)

The village filed for a variance from the Sanitary Water Board's deadlines for construction of secondary sewage treatment facilities under SWB-13 The village wanted to delay secondary treatment of effluents until December 31, 1975 or as an alternative December 31, 1974. The date specified for compliance under SWB-13 was December 31, 1973. The Board was restricted by the 1970 Act from granting a variance for longer than a year. The variance was granted until December 5, 1972. It was possible to have an extension for another year if sufficient progress were proven. The current variance was issued subject to the following conditions: 1. the village meet the following deadlines; a. completion of bidding process for engineering design by April 30, 1972, b. completion of the final engineering design by November 15, 1972, 2. the village must submit periodic progress reports to the EPA, 3. the village had to post a $100,000 performance bond, and 4. the village should not increase its pollutional discharges during the period of the variance. On January 13, 1972 the

city filed a petition asking the Board to amend its order by adjusting the deadline dates and removing the performance bond requirement. The Board denied this petition.

PCB 71-289 (1-6-71) Environmental Protection Agency v. Valley Line Company

The EPA argued that the company was causing water pollution by allowing oil to be discharged from one of its oil barges. The Board held this case to be quite similar to PCB 71-246, EPA v. Yetter Oil Company. With this as a precedent, the Board ordered the Valley Line Company to: 1. cease and desist water pollution and 2. pay a money penalty of $1,000.

PCB 71-290 (1-6-72) Richard Abel & Company, Inc., and Zion State Bank and Trust Company v. Environmental Protection Agency

The respondents requested a variance from the NSSD sewer ban. They wanted to construct a new book warehouse and connect it to existing sewage facilities Inasmuch as substantial hardship was not proven, the petition was denied.

PCB 71-291 (5-17-72) Environmental Protection Agency v. James McHugh Construction Co. et.al.

The EPA filed a complaint against the construction company and the city of Chicago for creating water pollution hazards. Water used for cooling various activities was being released into the North Branch of the Chicago River. The Board felt that the EPA failed to submit adequate evidence to prove their allegations. The case was dismissed.

PCB 71-295 (12-21-71) City of Lincoln v. Environmental Protection Agency

The city filed for a variance from deadlines for construction of new treatment facilities under SWB Rules and Regulations SWB-14. On the basis of the city's past record the city was granted the variance with the following conditions: 1. the city move toward compliance as rapidly as possible, 2. the city submit an affidavit indicating additional costs of additional requirements made by the EPA, 3. the city post a performance bond of $150,000, and 4. periodic reports on progress had to be filed.

PCB 71-312 (12-21-71) Environmental Protection Agency v. Custom Farm Services, Inc.

The EPA argued that the company was causing water pollution through the discharge of chemical fertilizers into an unnamed tributary. Some fish kills were noted. The Illinois Department of Conservation, Division of

Fisheries estimated the value of the fish at $162.34. The parties, on November 29, 1971, agreed upon the facts and penalties were determined. The Board was in agreement also. The company was ordered to: 1. cease and desist water pollution, 2. take necessary steps to prevent further episodes, 3. post a performance bond of $10,000 to assure performance of 2 above, 4. pay $162.34 for the fish killed, and 5. pay a money penalty of $2,000.

PCB 71-313 (10-14-71) (12-21-71) — Lake County School Dist. #64 v. Environmental Protection Agency

PCB 71-314 — Waukegan Park District v. Environmental Protection Agency

PCB 71-321 — Central Christian Church v. Environmental Protection Agency

PCB 71-322 — Waukegan Disposal Service, Inc. v. Environmental Protection Agency

The respondents applied for a variance from the NSSD sewer ban. Board action was postponed on the basis of inadequate information having been posted by the respondents. On December 21, 1971 a decision was rendered by the Board for PCB 71-313 and PCB 71-314 on the basis that the required information was supplied. Using PCB 71-247, School Building Commission v. EPA, as a precedent, the variances were granted. PCB 71-321 was dismissed on the basis of inadequate information. PCB 71-322 was not reconsidered at that time.

PCB 71-317 (10-18-71) — Sanitary District of Durand v. Environmental Protection Agency

The district requested a variance from compliance dates for the construction of treatment facilities, until the PCB then, current PCB hearings on new water quality standards were complete and filed as Regulation #71-14. The district also noted that they needed to await financial assistance from outside sources -- the State and Federal Governments. The Board felt that the request was unreasonable. The tone of the Board opinion was that water pollution control could not await the passage of new rules and the creation of monies from outside sources. The Board further noted". . .the present requirement has been on the books for several years, and it is high time it was complied with." The petition was denied.

PCB 71-319 — Environmental Protection Agency v. Holland Ice Cream and Custard Co.

The EPA charged the company with: (1) water pollution from its production

operations, (2) failure to obtain certification for the treatment plant operators, and (3) failure to submit monthly operational reports. The EPA did not present adequate evidence to substantiate most of the allegations. The company submitted a letter to the Board answering the complaints, and petitioning for a variance from the Baord. The Board opinion at this time was: 1. the company should operate its treatment facilities as efficiently as possible, 2. the company should submit the required operational reports, 3. by March, 1972 the company was to submit a positive compliance program, and 4. the company's letter mentioned in the text above was dismissed as a variance due to the fact that no compliance program had been included in the letter. On February 25 the company reported its progress to the Board and on the strength of this report, and a subsequent request for an extension, the Board granted an extension of the deadlines set in part three of the original order.

PCB 71-323 (4-25-72) Environmental Protection Agency v. Ayrshire Coal Company, of Division of American Metal Climax Inc., and American Metal Climax, Inc., a Corporation

The EPA argued that Ayrshire's mining operations were causing water pollution. The evidence offered indicated that some abatement steps had been taken by the respondents. The Board ordered the company to work toward full compliance with State standards and presented Ayrshire with some compliance dates. The company was ordered to: 1. meet the qualifications of the required abatement program, 2. file a performance bond in the amount of the estimated cost of completing the abatement program, and 3. pay a money penalty of $1,000.

PCB 71-325 (11-29-71) (3-14-72) (2-3-72) Environmental Protection Agency v. Airtex Products, Inc., et. al.

The EPA filed a complaint alleging that both respondents had tended to cause water pollution. The Airtex Corporation was charged with the release of cyanide into the city of Fairfield sewer system. The city of Fairfield was charged with operating a storm sewer system which carried the Airtex Company's cyanide discharges to the Little Wabash River. The company moved on November 29, 1971, that the case be dismissed on the basis of insufficient information. The Board denied this motion. The allegations were found to be warranted. The Board ordered the following: 1. Airtex was to cease and desist water pollution, 2. the city of Fairfield was to cease and desist accepting wastes from the company in the city's storm sewage system, 3. the company was to pay a money penalty of $11,000, and 4. the city was to pay a money penalty of $1,000. Following this order the respondents filed a petition for a stay on the penalties. The

city asked for a stay on the basis that the funds for such a payment had not been appropriated for that year. The Board held that this had to be verified before granting such a request. The company petitioned for a stay pending appeal This stay was granted. It was also requested that the cease and desist order be deleted from the four requirements mentioned above, since the EPA had not asked for such an order. This request was granted. Mr. Dumelle, a Board member, filed a dissenting opinion against the latter action.

PCB 71-334 (10-28-71) — Robert L. Winsor v. Environmental Protection Agency

Mr. Winsor requested a variance from the NSSD sewer ban. His septic system was deteriorated to the point where it was a pollution hazard and he wanted to connect his dwelling to the sewage system. The Board felt that if this could be verified, a variance was warranted. The variance was granted pending verification of respondents allegations.

PCB 71-337 (1-24-72) (2-3-72) — Lake County Department of Public Works v. Environmental Protection Agency

The respondent requested a variance from water quality standards concerning chemical coagulation for a tertiary treatment plant. The respondent needed time to seek clarification on EPA Permit, No. 71-AB-403. This permit contained statements concerning chemical coagulation. The Board felt that the variance was warranted with the following conditions: 1. by February, 1972 the construction of the tertiary lagoons was to be completed, 2. the petitioner was to proceed with abandonment of the present facilities as per the arrangement noted in the EPA Permit, and 3. periodic progress reports were to be filed with the Board and the EPA.

PCB 71-343 (1-31-72 (3-2-71) (5-10-72) — North Shore Sanitary District v. Environmental Protection Agency

The NSSD requested a variance from the Board's March 31, 1971 sewer ban established by PCB order 70-7. The justification offered was that substantial progress had and was continuing to be made toward compliance with the order. The district further argued that an economic hardship had been created for many businesses in the area. For example, they argued that construction companies were not receiving new construction contracts and the local savings & loan organizations were not able to find adequate sources for lending, since the sewer ban had the effect of haulting all new commercial and residential construction. The Board argued that the NSSD was not, in fact, making substantial progress toward meeting its compliance schedule. The Board did sympathize with the economic hardship argument. The Board granted the variance for 1,000 new connections

for two of the district's six treatment plant operations. This figure of 1,000 was offered as the probable need for the area by Mr. Robert Macgruder, of the Waukegan Chamber of Commerce. The variance was granted with numerous conditions. The conditions, too numerous for this summary, generally outlined the procedures by which the new permits would be issued and alloted between the two plants.

The Board required the installation of chlorination operations at key points in the district. The reason for this was to open some of the beach areas on the lake for the summer. Board member, Mr. Jacob Dumelle, filed a dissenting opinion with regards to the latter requirement. Mr. Dumelle noted that chlorine destroys most bacteria but not viruses. He felt that ozone should have been used instead of chlorine since ozone would handle both problems--bacteria and virus. On February 10, 1972, the NSSD filed a petition for Reconsideration and Rehearing. The district sought modification of the 1,000 permit only variance. The Board raised the allowable number of permits from 1,000 to 5,000. Under the new order the permits were to be divided among the two areas authorized to allow new connections on a 1/3: 2/3 basis--one of the treatment plants was thought to be operating more efficiently than the other.

PCB 71-344 (6-20-72) — Mars Development Co., et. al. v. Environmental Protection Agency

The respondent requested the withdrawal of a variance petition filed previously with the NSSD. The Board so ruled the case was dismissed.

PCB 71-350 (1-6-72) — John & Luella Wojcik v. Environmental Protection Agency

The respondents requested a variance from the NSSD sewer ban. They wanted to connect a new home to the existing sewage facilities. The respondents failed to demonstrate hardship and the petition was therefore denied.

PCB 71-351 (11-8-71) — Village of Irvington v. Environmental Protection Agency

The village filed a request for variance from improvement deadlines set by SWB-13 concerning water quality standards. The petition was filed with inadequate information for making a judgement. The Board dismissed the petition suggesting that an amended petition, in compliance with procedural rules and regulations, be submitted.

PCB 71-355 (5-23-72) (6-20-72) — Environmental Protection Agency v. City of Jacksonville

The EPA filed a complaint against the city alleging water pollution on four occassions, steming from the operation of the city's power and water

treatment plant. The Board found the allegation to be warranted and ordered the city to: 1. move as quickly as possible to eliminate the source of the pollution including completing the plans for a new sludge dewatering equipment operation, 2. cease and desist the release of oil and chromium into the creek, 3. post a performance bond of $10,000, 4. submit the plans for the total erradication of the problem, 5. submit a program for the abatement of further pollution in the interim period, and 6. pay a money penalty of $1,000. The order was slightly ammended on June 20, 1972 but the tone and major penalty requirements were unaffected.

PCB 71-361 Glenn and Claramae Younker v. Environmental Protection Agency
(2-17-72)

The Younkers requested a variance from facility improvement deadlines. They argued that the village of Blue Mound might provide municipal treatment within the next few years and render any present investment obsolete. Evidence offered indicated that the village was several years away from such a program. In light of this development, the Younkers proposed an alternative to the "expensive" equipment required under state regulations. The Younkers proposed an operation which sprinkled the wastes over a given segment of ground and left the purification of the sewage to a perculating process. The EPA noted that there was inadequate evidence proving the usefulness of such a system. The Board ordered that the Younkers offer plans for such a spraying system for EPA review and approval. It was noted that if the EPA denied these plans, the respondent had to submit plans for meeting the state's effluent standards within the shortest practicable time.

PCB 71-363 Vance T. Venable v. Environmental Protection Agency
(11-23-71)

The respondent requested a variance from the NSSD sewer ban on the basis that his septic system was delapidated. The Board approved the variance pending verification of this fact.

PCB 71-375 Joseph Achilli Builders v. Environmental Protection Agency
(1-20-72)

The respondent requested a variance from the city of Elgin sewer ban. Before a Board hearing was held, the respondent withdrew the petition on the basis that the sewer ban had been lifted. The case was dismissed.

PCB 71-376 Carrie F. Andracki. et. al. v. Environmental Protection Agency
(12-9-71)

The respondents petitioned the Board for a reconsideration of a previous decision denying their request for a variance to the NSSD sewer ban--PCB 71-149, Andracki v. EPA. Inasmuch as no new information was submitted, the petition was dismissed.

PCB 71-378 (2-2-72) Chesterfield Development Corp. v. Environmental Protection Agency

The respondent requested a variance from the NSSD sewer ban. They wanted to construct a new single-family home and connect it to existing sewage facilities. Since the Board had just ruled to allow a blanket variance of 5,000 connections, the petition was dismissed. The respondent was directed to file for a permit directly with the district. (See PCB 71-343, NSSD v. EPA.)

PCB 71-384 (3-2-72) Village of Lena v. Environmental Protection Agency

The village requested a variance for an extension of time in order to design and complete its waste treatment facilities. The city further requested assistance by asking the Board to order it to issue bonds to finance the new facilities. As regards the first request, the Board argued that the village had been acting in good faith to meet the proposed deadlines, but for reasons beyond its control was unable to do so. The Board granted the variance and assigned new compliance dates for the village. As regards the question of bond issuance, the Board noted that it had no authority under the 1970 Act to order a community to issue bonds. The Board could order a village to abate pollution and to finance this in the most efficient way possible. The village could, if it chose to, use this as a rationale for issuing non-referendum bonds to finance their facilities.

PCB 71-387 Dearborn Chemical Division of Chemed Corp. v. Environmental Protection Agency

The respondent requested an extension of the exemption period from state regulations granted it in October, 1971--PCB 71-205. The EPA recommended the Board comply with the request, based on the progress having been made by the company. The Board granted the extension.

PCB 71-388 (1-3-72) (3-28-72) Kraft Foods Division of Kraftco Corp. v. Environmental Protection Agency

Kraft Foods petitioned for a variance from the sewer ban that had been placed on the city of Mattoon, PCB 71-8. The variance was granted with several conditions. The Board ordered the company to: 1. connect with the city of of Mattoon, 2. have its facility operators certified by the EPA, 3. provide temporary retention capacity, 4. equip the retention facilities with aeriation equipment, 5. install a gauge that would allow the company to determine when the discharged wastes from its retention facilities were causing an overload on the city system, 6. not begin operation until these

aforementioned pretreatment facilities were constructed, 7. limit the nature and contents of the discharges, and 8. close the valve at the aerated storage basin when sotrm water was bypassed by city facilities.

PCB 71-389 City of Elmhurst v. Environmental Protection Agency
(3-14-72)

The city requested an extension, from SWB-14 water quality standard completion dates, for advanced treatment facilities. Since the new water quality standards of the PCB, extended the dates over those required under previous SWB standards, it was not felt that the city would need an extension. The case was dismissed as moot.

PCB 71-390 Andros Corp. v. Environmental Protection Agency
(1-6-72)

The respondent requested a variance from the NSSD sewer ban. They wanted to construct some apartment units and connect them to the existing sewage facilities. The Board denied the petition on the basis that hardship was not proven. The Board noted a pending decision concerning the NSSD sewer ban, the respondent was directed to file a petition for a permit directly with the NSSD, on the basis that the district would likely receive a variance on its ban.

Opinions Decided

January 1, 1972 - June 30, 1972

PCB 72-5 Village of Wilmette v. Environmental Protection Agency
(1-17-72)

The village of Wilmette applied for a variance from the SWB construction deadline of July, 1972, for the village's new sewage treatment plant. The application for variance was in anticipation of possible delays in meeting the deadline. The opinion of the Board was that at the time there was no need for such a variance based on the village's progress report.

PCB 72-7 York Center Community Cooperative v. Environmental
(1-17-72) Protection Agency

The York Center Community Cooperative applied for a variance concerning Illinois water quality standards, on the basis that the difference between the required standards and current performance was insignificant. The application was not accompanied by any proposed program for achieving compliance in the future. The improvements would cost an estimated $39,000 and the number of families serviced was only seventy-three.

The respondent argued that this represented "excessive" cost per family. The Board dismissed the petition on the basis that there was not enough information given to warrant a decision either way.

PCB 72-8 Norman Nachtrieb v. South Palos Township Sanitary District (4-17-72)

Mr. Nachtrieb filed a complaint against the South Palos Township Sanitary District for not completing a planned sewage treatment plant construction project. The district stopped construction on the basis of unexpected excessive construction costs. Mr. Nachtrieb argued that the PCB could order the selling of general revenue bonds and thereby enable the district to complete the construction. The Board argued that the dilemma should have been foreseen by the district and that their problem was the result of negligence. The Board, "in a tone of disgust", ordered the village to: 1. take all steps possible to stop pollution, 2. set completion dates for the construction project, and 3. file periodic progress reports with the EPA.

PCB 72-9 Village of Deerfield v. Environmental Protection Agency (4-4-72)

The village of Deerfield petitioned for an extension on the completion date, for its sewage plant construction. The Board, in essence, had extended this deadline with the passage of new water quality standards in March, 1972. The Deerfield petition was therefore dismissed as "moot".

PCB 72-11 Congregation Am Echod v. Environmental Protection Agency (4-4-72)
PCB 72-12 North Shore Industrial and Research Centre v. Environmental Protection Agency

These two organizations petitioned the EPA for a variance to the North Shore Sanitary District sewer ban imposed by PCB 70-7. The companies were directed by the Board to file for a connection permit with the NSSD, inasmuch as the sewage plants to which the companies would be tributary, had been improved since the issuance of the ban. The variance petitions were dismissed as moot, in line with the variance granted in PCB 71-343.

PCB 72-14 Mr. and Mrs. Bobbie J. Orick v. Environmental Protection (2-8-72) Agency

PCB 72-22 Hubert R. Tucker v. Environmental Protection Agency

These two citizens petitioned the EPA for a variance to the NSSD sewer ban. The Orick petition was granted on the basis of economic hardship. The

Tucker petition was granted on the basis that the structure was already constructed when the sewer ban went into effect.

PCB 72-15 (1-24-72) Moweaqua Community Unit School District 6A v. Environmental Protection Apency

The school district filed a petition for variance from the deadlines for improving inefficient treatment plants, on the basis that they wanted to plan a new treatment facility. They, however, offered no proposed specifications or specific plans for the alleged new plant project. The Board felt, as they did in PCB 72-7, York Center v. EPA, that this would be the same as granting an open ended variance. The petition was denied until the school district could present a positive program for new plant construction.

PCB 72-18 (5-30-72) City of Arcola v. Environmental Protection Agency

The city filed a petition requesting a variance from the July 1, 1972 date, for compliance with water quality standards set by Sanitary Water Board order SWB-14. The city planned completion of their current plant construction project by November 1, 1973. The new deadline for compliance with the standards set by the Board on March 7, 1972 was set at December 31, 1973. On this basis, the city's petition was considered moot and dismissed.

PCB 72-24 (4-4-72) Metropolitan Sanitary District v. Environmental Protection Agency

The Sanitary District (MSD) filed a petition requesting a variance from sewage treatment construction deadlines. The petition was not acted upon by the Board. See PCB 72-110, MSD v. EPA.

PCB 72-26 (5-30-72) Environmental Protection Agency v. Village of Lake Zurich

The EPA filed a complaint against the village of Lake Zurich, alleging that the village's sewage treatment plant was contaminating Grassy Lake, Flint Creek, and the Fox River. The Board found the complaint to be warranted and ordered the village to: 1. abate pollution by meeting with the construction program set forth by the Board, and 2. pay to the State of Illinois a penalty of $100 for violation of the Act.

PCB 72-28 (4-17-72) Park Manor Town House Apts. v. Environmental Protection Agency

Park Manor Apartments operates a small treatment facility for 24 apartment units. The treatment facility did not meet effluent standards set by the

Board. Park Manor filed a petition for a variance from these standards arguing: 1. that Park Manor would soon connect its sewage lines with the village of Lincolnshire, and 2. that the cost of bringing their current operation in line with PCB effluent standards would be excessive. The Board granted the petition with the following provisions: 1. Park Manor install temporary disinfection facilities, and 2. Park Manor shall provide a satisfactory evidence to the Board and the EPA that it has permission to connect with the village sewer facilities.

PCB 72-32 Niles Terrace, Inc. v. Environmental Protection Agency
(2-3-72)

Niles filed a second petition for a variance from the NSSD sewer ban. The first, PCB 71-280, discussed above, was denied. The second petition was also denied on the basis that the apartments were constructed after the sewer ban was ordered. The petition was dismissed.

PCB 72-34 Granite City Steel Co. v. Environmental Protection Agency
(2-7-72)

The corporation requested a variance from the existing SWB water quality standards, and the proposed regulations, pending at that time. The petition was dismissed as being premature.

PCB 72-37 Pfanstiehl Laboratories v. Environmental Protection Agency
(3-2-72)
PCB 72-42 Charles Stone v. Environmental Protection Agency

Both parties filed a petition requesting a variance from the NSSD sewer ban of March 31, 1971. Accompanying evidence indicated that both parties were connected to the NSSD sewage treatment facilities prior to the ban, but for various reasons temporarily stopped using the facilities. The petitions were entered to allow the hookups again. The Board granted the petitions on the basis that both were connected to NSSD facilities prior to the ban.

PCB 72-38 Borden Chemical Co. v. Environmental Protection Agency
(5-23-72)

Borden petitioned for an extension on its construction schedule, reviewed in an earlier variance proceeding -- PCB 71-23. Inasmuch as the Board had already set a new deadline with its new water quality standards, it did not feel that there was anything to be decided. The petition was dismissed.

PCB 72-39 ABC Great States Inc. v. Environmental Protection Agency
(5-3-72)

The company petitioned for a variance in hooking up its operations with the Aurora sewage system on the basis of "justifiable delays". The Board

denied the variance on the basis that the reasons for delay were not justified.

PCB 72-58 (3-14-72) The City of Fairfield v. Environmental Protection Agency

The city asked for a variance from the required compliance dates set forth in SWB-14. The variance petition was temporarily set aside. The Board gave the city 20 days in which to offer more information and amend their variance petition. On March 14, 1972, the Board indicated that in light of new deadlines and new water quality standards that the Fairfield petition was no longer necessary.

PCB 72-59 (2-22-72) (5-17-72) Tennis Development, Inc. v. Environmental Protection Agency

The company petitioned the PCB for a variance from the NSSD sewer ban. No decision was made by the Board, on the basis of inadequate information. The company was given 20 days in which to submit a complete and acceptable petition. On March 17, 1972, the Board granted the petition. It was decided, in the light of new information, that only residents of the NSSD area would be allowed membership in the proposed tennis club. This would not add any strain on existing sewage treatment facilities.

PCB 72-64 (6-6-72) City of Mattoon v. Environmental Protection Agency

The city petitioned for the removal of the Board's sewer ban entered April 14, 1971 in PCB 71-8, City of Mattoon v. EPA. The ban was lifted on the basis of adequate progress having been made toward compliance with the PCB order.

PCB 72-68 (3-7-72) Godfrey Township Utility Board v. Environmental Protection Agency

The Township Board requested a year variance from lagoon holding basin standards while existing treatment facilities were being improved. The Board delayed its decision, giving the Township Board 20 days in which to submit more illuminating information concerning their position. On June 27, 1972, the Board held that the revised petition indicated that the Township Board had been negligent in attempting to meet Illinois Water Quality Standards. The new petition also gave no specific commitment by the Township Board to meeting the standards at some future date. The petition for variance was denied.

PCB 72-69 Environmental Protection Agency v. Citizens Utilities Company of Illinois

The EPA charged that the company's sewage treatment plant was polluting

the waters of Illinois. The respondent, Citizens Utilities Co., filed for an injunction against the EPA and the PCB in the Circuit Court. On the basis of this action, the EPA filed a Motion to Dismiss the case before the Board, on the grounds that the impending legal battle would not necessarily advance the goal of pollution abatement. The Board concurred with the EPA's opinion.

PCB 72-86 Environmental Protection Agency v. Rex Chainbelt, Inc.
(5-23-72)

The EPA filed a complaint against the company alleging the release of cyanide and cyanogen compounds into St. Joseph's Creek. The Board viewed the charges as warranted and ordered the company to: 1. cease and desist the pollution, and 2. pay the State of Illinois a penalty of $2,000.

PCB 72-88 Mobile Home Park v. Environmental Protection Agency
(3-14-72)
PCB 72-90 Marmion Military Academy v. Environmental Protection Agency
(3-14-72)

The two parties sought a variance from meeting the SWB water quality standards. The petitions were dismissed as moot, since the Board had recently extended the deadlines with the passage of new water quality standards. (See PCB 72-58, City of Fairfield v. EPA.)

PCB 72-93 Laesch Dairy Co. v. Environmental Protection Agency
(3-14-72)

The company filed a petition for variance with regards to SWB effluent standards. In light of the Board's passage of new compliance dates, the petition was viewed as being moot.

PCB 72-97 Robert E. Nilles, Inc. v. Environmental Protection Agency
(3-28-72)
(4-25-72)
PCB 72-108 Central Christian Church v. Environmental Protection Agency
(3-28-72)

The two parties submitted petitions seeking variances from the NSSD sewer ban of March 31, 1971. In PCB 71-343, of March 2, 1972, the Board granted the NSSD a blanket variance for the construction of 5,000 new homes. The Board felt the two respondents listed above should first apply with the district for variances under the March, 1972 decision. The current petitions were dismissed as moot.

PCB 72-98 Environmental Protection Agency v. Texaco, Inc.
(5-23-72)

The EPA filed a complaint against the company alleging that salt water

had leaked from a salt water well into the East Fork Creek. The Board found the complaint warranted. The evidence indicated that Texaco had, upon discovering the spill, acted judiciously and immediately to stop the pollution. On this basis, the only Board action was to fine Texaco $200 for violation of the Act.

Dissenting Opinion by Board member Jacob Dumelle:
Mr. Dumelle argued that the Board's fine was inadequate to persuade potential polluters that the state was serious. He noted that in a similar case, PCB 72-86, that the fine levied was $2,000, not $200. Mr. Dumelle further pointed out that the case was not brought up until one year after the episode occurred. He felt this did not indicate Texaco's willingness to abate pollution.

PCB 72-110 (4-4-72) (5-23-72) 6-27-72) — Metropolitan Sanitary District v. Environmental Protection Agency

MSD filed a variance petition with the Board on January 14, 1972 -- PCB 72-24. As noted earlier, the Board did not act on the petition at that time. Failure to act by the Board, was interpreted as granting the petition by MSD. The Board argued that such interpretations were unwarranted. The current petition was submitted to resolve the dispute. MSD asked for a variance from the Board's effluent standards until May, 1974. Since the operations of the sewage plant in question were close to the requirements, and further, since the MSD had submitted plans for a new treatment plant to replace the one in question, the petition was granted. In line with Board rules, however, the petition was to be reviewed annually until the plant's completion. The Board's order was to: 1. move as quickly as possible to improve interim needs, 2. post a performance bond in the amount of the cost of the newly planned project, 3. present the EPA with a critical path analysis for the completion of construction, and 4. make periodic progress reports to the EPA.

PCB 72-121 (5-17-72) — Winslow H. Adams, Jr. et. al. v. Environmental Protection Agency

Mr. Adams petitioned the EPA for a variance from the NSSD sewer ban. He wanted to add a bathroom to his home. The Board noted that since the same family would use the new bathroom and the number of persons using NSSD facilities was not, therefore, increased, such a connection was acceptable. The Board argued that there was no need to file a variance under such circumstances. The petition was dismissed as moot.

PCB 72-135 — Metropolitan Sanitary District of Greater Chicago v. Environmental Protection Agency

The Metropolitan Sanitary District requested a variance from tertiary treat-

ment plant construction completion dates, as set by SWB-14. The primary reason given by the district was the possible regionalization of the area which would facilitate the consolidation of the district's operations. The EPA argued that construction plans for a tertiary treatment plant were originally developed by the MSD in 1968 and shelved shortly thereafter in anticipation of the regionalization of sewage treatment operations. Nonetheless the EPA argued that the Streamwood plant was operating considerably below required water quality standards, that progress toward correcting the situation had been very slow, and that the regionalization of the area was still far in the future. The Board agreed with the EPA and ordered the district to: 1. pay the State of Illinois $6,000 in money penalties, 2. move as soon as possible to an adequate treatment position, 3. meet the state's effluent standards, 4. post a $50,000 performance bond, and 5. construct whatever facilities necessary to meet PCB Rules and Regulations.

PCB 72-137 (6-29-72) McHenry Shores Water Co. v. Environmental Protection Agency

The McHenry Shores Water Co. filed a petition for a variance from water quality standards. They argued that continued and steady programs was being made to stop pollution. The EPA after some investigation found that there had been a record of complaints by private sources for over a year. The EPA requested rather strong action against the company by the Board. The Board found the Agency's claims to be warranted and ordered the company to: 1. file a specific program to halt the pollution, 2. post a performance bond of $50,000, 3. pay the State of Illinois $3,000, and 4. operate as efficiently as possible during the interim period awaiting completion of new facilities.

PCB 72-154 (6-27-72) Robert W. Graham v. Environmental Protection Agency

PCB 72-246 Lewis & Clark Community College v. Environmental Protection Agency

The two parties above petitioned the Board to allow them to connect to the Godfrey Township sewage treatment system. (See Godfrey v. EPA, PCB 72-68). Inasmuch as construction on the Graham home was begun before EPA's concerns with the Godfrey Township sewage system, the petition, was granted. As regards to Lewis & Clark College, the petition filed did not give the Board adequate information on which to make a decision. It was decided that a hearing would be scheduled pending the admission of further information by the College. No decision was made.

PCB 72-156 (4-25-72) Waukegan-Gurnee Industrial Park of Delaware, Inc. v. Environmental Protection Agency

The petitioner sought a variance from the NSSD sewer ban. Since the Board

had already granted the district a variance, allowing the connection of 5,000 new dwellings, the petitioner was directed to apply for a permit with the district. The petition was dismissed as moot.

PCB 72-157 (5-10-72) Jesse and Josie Starks v. Environmental Protection Agency

The Starks family filed a petition to connect a private residence to the NSSD sewage treatment facilities. The petition was granted on the basis of economic and family hardship proven by the family.

PCB 72-161 (6-14-72) Danville Sanitary District v. Environmental Protection Agency

The Danville Sanitary District petitioned for relief from the Board's ruling in Danville Sanitary District v. EPA, PCB 71-28. On the basis of progress made toward meeting the earlier Board's order, the present petition was granted.

PCB 72-167 (4-25-72) Village of Coulterville v. Environmental Protection Agency

The village of Coulterville requested a variance from the deadlines set by the Board in meeting the state's water quality standards. The Board dismissed the petition on the basis of insufficient information.

PCB 72-176 (5-10-72) State National Bank of Evanston v. Environmental Protection Agency

The bank filed a petition requesting a variance from the NSSD sewer ban. A new bank building had been constructed and the old one torn down, but a new connection had to be made. The Board granted the request noting that there would not be a net change in the number of connections since the old building was torn down.

PCB 72-177 (5-3-72) Elsie M. Kelberger v. Environmental Protection Agency
PCB 72-178 Mark E. Cook v. Environmental Protection Agency

The two parties requested a variance from the NSSD sewer ban on the district's Clavey Road treatment plant. The Board held that this particular treatment plant was well on its way to full compliance with standards. The two parties were directed to apply directly to the district for a permit.

PCB 72-192 (5-10-72) Bruno E. Feige v. Environmental Protection Agency

Mr. Feige filed a petition for a variance from the NSSD sewer ban. They

wanted to construct a single family dwelling and connect it to the existing sewage facilities. The Board delayed the decision for 20 days allowing Mr. Feige to furnish additional information.

PCB 72-193 Dante A. Greco v. Environmental Protection Agency
(6-20-72)

Mr. Greco filed a petition for a variance from the NSSD sewer ban. He wanted to build a new home at the same location where previously a home had burned. The petition was granted on the basis that there would be no net increase in connection.

PCB 72-195 Downers Grove National Bank, Trustee Under Trust #71-6
(6-20-72) v. Environmental Protection Agency

The bank requested a variance from a sewer ban placed on the village of Bolingbrook. The petition was granted subject to continued surveillance by the village to assure no overloading of existing facilities.

PCB 72-202 Congragation Am Echod v. Environmental Protection Agency
(6-20-72)

The petitioner sought a variance from the NSSD sewer ban. The Board refused the petition on the basis that the net effect on the rest of the area was not shown in the petition.

PCB 72-208 Estella Lewis v. Environmental Protection Agency
(5-23-72)

Estella Lewis petitioned for a variance from the NSSD sewer ban. Mr. Lewis wanted to construct a new single family dwelling and connect it to existing sewage facilities. The Board witheld a decision granting the petitioner 20 days to furnish additional information.

PCB 72-233 Theodore Harris v. Environmental Protection Agency
(6-14-72)

Mr. Harris requested a variance from the NSSD sewer ban on the basis that he was going to destroy one house and build another in its place. Inasmuch as there would be no net gain in connections, the Board approved the request.

PCB 72-263 Patricia Hinse v. Environmental Protection Agency
(6-27-72)

Patricia Hinse petitioned for a variance from the NSSD sewer ban. She wanted to connect the Aladdin Flower Shop to existing sewage facilities. The Board delayed the decision for 20 days asking Ms. Hinse to furnish additional information.

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