

ILLINOIS POLLUTION CONTROL BOARD
July 7, 1977

In the Matter of)
Amendment to Rule 203(h)) R75-7
Water Pollution Regulations)

OPINION OF THE BOARD (by Dr. Satchell):

This opinion is in support of the Board Order in the above matter, passed on May 12, 1977.

BACKGROUND AND CHRONOLOGY

The original Rule 203(h) of Chapter 3 provided that:

"Any substance toxic to aquatic life shall not exceed one-tenth of the 48-hour median tolerance limit (48-hr. TLM) for native fish or essential fish food organisms."

Since the adoption of this Rule, the Board had received requests for variances primarily to permit application of fish toxicants to aid in the achievement of "balanced" fish populations in lakes. The Board raised the question whether certain toxicants could be applied without the cost, time and energy expenditure of the variance procedure pursuant to Section 37 of the Illinois Environmental Protection Act (Act), Ill. Rev. Stat. Ch. 111 1/2, §1037 (1976).

On September 19, 1974 the Board requested the Illinois Institute for Environmental Quality (Institute) to undertake a study to determine the state of the art of fish toxicants. The Institute contracted with the Aquatic Biology Staff of the Illinois Natural History Survey to perform the study.

On May 7, 1975 the Board received the report entitled, "An Evaluation of Fish Toxicants," IIEQ Document No. 75-13. This apparently was a preliminary report to the more formal printed version submitted to the Board on July 11, 1975 and entitled, "Chemicals Used to Control Fish and Aquatic Plants in Illinois" (Ex. 1). As noted in the above title, this report also included information on aquatic herbicides and also carried the designation of "IIEQ Doc. No. 75-13."

A proposed amendment to Rule 203(h) and supporting statement of need was published June 2, 1975 in the Board's Environmental Register No. 103. This amendment would have permitted two fish toxicants, antimycin and rotenone, to be applied to waters of the State under permit conditions established by the Illinois Environmental Protection Agency (Agency) without prior grant of a variance from Rule 203(h).

Hearings were held on the proposed amendment on July 16 (Springfield) and July 22, 1975 (Urbana). Evidence was received on piscicides (fish toxicants) and on aquatic herbicides (materials used to kill aquatic plants). Some aquatic herbicides may adversely affect water quality, fish and fish food organisms.

Based on the aforementioned studies and evidence adduced at the hearings, Dr. Russell Odell prepared a proposed final draft opinion and final draft language for Rule 203(h) which was adopted for public comment by the Board on August 28, 1975. The proposed final draft language of Rule 203(h) was published for public comment in the Environmental Register No. 109, dated September 5, 1975.

The major changes in the proposed final draft were: (1) the inclusion of aquatic herbicides; (2) substituting "USEPA registered" for named piscicides and aquatic herbicides; and (3) deleting the mandatory Agency permit requirement for applications to waters not used for food processing or public water supplies, when made by or under the supervision of the Department of Conservation or the Illinois Natural History Survey.

During the public comment period, P.A. 79-790 became effective (October 1, 1975). This amendment to the Act mandated that the Institute prepare an economic impact study and that the Board conduct public hearings on the study.

The Institute contracted for the aforementioned study with Drs. Sonia and Robert Vogl, Environmental Consultant and Assistant Professor respectively, of the Loreda Taft Field Campus, Northern Illinois University. Their report entitled, "Economic Impact of Fish Toxicant Regulations," IIEQ Doc. No. 76/16 was submitted to the Board on August 5, 1976. A substantive hearing was held on September 23, 1976 in Springfield on aquatic herbicides and this was followed on the same day by a hearing on economic impact. The second economic impact hearing was held in Carbondale on October 19, 1976.

Pursuant to Section 13(a)(6) of the Act, the amendment of 203(h) (as published in the Environmental Register No. 109 on September 5, 1975) was submitted on November 1, 1976 to the "Interagency Committee on the Use of Pesticides" for approval.

On February 22, 1977 the Interagency Committee submitted a proposed final draft amendment to Rule 203(h) with the recommendation for Board adoption. On March 3, 1977 the Board authorized the publication of this draft for public comments. It is this draft, with minor editorial changes, that is proposed for adoption.

REASONS FOR SUGGESTED CHANGES

The initial approach to changes in Rule 203(h) is well demonstrated by the Board's September 19, 1974 letter to the Institute, requesting a study which sought information on fish toxicants which had the desirable characteristics of (a) efficiency after short exposure to toxicant; (b) minimal hazard to personnel applying formulation; (c) treated waters non-hazardous to man, livestock, and wildlife; (d) rapid degradation to permit early restocking; (e) killed fish non-toxic to man and wildlife; (f) efficiency in cold, warm, soft, hard, acid, alkaline, clear, and turbid waters; (g) survival of plankton, algae, insects, bottom fauna, and aquatic plants; (h) sterilization of fish eggs (i) rapid detoxication by chemicals; (j) non-repellency of fish; (k) irreversible action; (l) no odor or taste to water or affected fish; and (m) easy application with available equipment.

The resulting study, IIEQ Doc. No. 75-13 (Ex. 1), contains a wealth of information on the two piscicides, rotenone and antimycin, and also information on aquatic herbicides and algicides which were currently registered by U.S. EPA or had been granted an experimental label, or for which registration may be in the process (Ex. 1, p. 27). Even a casual reading of the above and the list of U.S. EPA registered (1974) aquatic herbicides and algicides (Ex. 12) is sufficient to recognize that the numerous compounds, offered in a number of formulations for a large variety of target species, precludes accumulating the detailed information originally sought by the Board for fish toxicants.

The Illinois Department of Conservation (hereinafter, Conservation) is mandated by law to manage fish and wildlife (Ex. 14).

It is stated [Ill. Rev. Stat. Ch. 127, §63(a)(1)] that "The Department of Conservation is to take all measures necessary for the conservation, preservation, distribution, introduction, propagation, and restoration of fish, mussels, frogs, turtles, game, wild animals, wild fowl and birds" (R. 196). Chapter 56 Section 1.2 states the Fish Code is to be administered by Conservation (R. 197) and Section 1.7 states in pertinent part

" . . . The Department may remove and dispose of all undesirable aquatic life from any waters under the jurisdiction of this State to maintain the biological balance of such life as the Department deems proper" (R. 198). [Emphasis supplied].

At the first hearing Mr. Rudy Stinauer, an area fishery biologist with Conservation, read Conservation Director Anthony Dean's statement (Ex. 3) opposing the rule change into the record:

"Illinois has 76,200 recreational ponds and lakes totaling 180,000 water acres. In addition, there are 133 potable water supplies consisting of 94,000 water acres. The Illinois Department of Conservation, Division of Fisheries, is charged with providing more and better sport fishing opportunities on recreational bodies of water. In order to do so, it is necessary to use approved chemicals, such as rotenone and antimycin, as a management tool to control fish populations. Because we are managing living organisms, the Division of Fisheries must work according to a biological clock and perform necessary work as soon as possible. To spend an interim period of time waiting to receive a variance could cause the problem to become so severe that it would take extra man hours, treatments and money to correct it. In some cases, the waiting time could allow the problem to become so severe that it could not be completely corrected.

"The Department believes that the proposed amendment to Rule 203(h), Chapter 3 of the Water Pollution Control Regulations is unnecessary because rotenone and antimycin, used as a fisheries management tool, presently are controlled by the Department. A fisheries biologist recommends use of these toxicants only if they are necessary and will enhance sport fishing. Both toxicants have been used in Department-owned waters, waters owned by other governmental entities and private waters. Application of the toxicants is always supervised and/or administered by a Department Fisheries biologist who is also licensed by the Illinois Department of Agriculture as a Pesticide Applicator.

"The Department regulates application of these toxicants by following the conditions outlined below. We feel that the following conditions express the Department's full realization of the harm indiscriminate or careless use can do:

- 1) The impoundment owner must possess a permit issued by the Department of Conservation before he can purchase or use the toxicant.
- 2) These permits specify the piscicide to be used, quantity, concentration (p.p.m.), name of receiving water, and expiration date of the permit.

- 3) Permits are issued only if the inspecting biologist determines a need for fish population control.
- 4) A record of all permits issued is kept by the Department of Conservation.
- 5) All reasonable precautions are taken to assure no piscicide escape into other waters. For example, the lake is drained down, or the spillway is sand bagged to insure that the fish toxicants do not go over the spillway of recreational lakes until they are no longer toxic to fish.
- 6) All toxicants used are biodegradable.
- 7) Fish killed are removed as determined desirable by the fisheries biologist. Normal procedures result in the removal of larger fish. Smaller fish are left as a means of fertilization provided there is no foreseeable health, safety or personal welfare problem.
- 8) Potassium permanganate is available for use as a detoxicant if it is needed.
- 9) A report of the fish kill is completed by the biologist administering the toxicant, and copies of the report are kept on file at the Department.

Past experience with the above procedures, involving on-site issuance of permits at the time of the inspection verifying the need, has shown that the Department's policy is sound and workable.

"It is the Department's belief that the introduction of a second permit/variance requirement stating mandatory requirements duplicates the procedure already used by the Department. It will also delay necessary application of these toxicants, and in turn will hinder the usefulness of this management tool. Additional negative aspects of the proposed amendment include additional paperwork and time on the part of the impoundment owner to meet the conditions of the permit; posting notices around the area; removing all fish killed; determining fish survival for 48 hours in live cans before normal activities and uses can be resumed; and reporting results of the fish kill. To require impoundment owners to meet the conditions of the proposed amendment would discourage him from attempting to provide better fishing; thus; fish populations would grow to a point where the resource would be less than desirable and continue to deteriorate.

"I reiterate that the Department employs professionally trained fish biologists who determine if toxicants need to be applied, issue permits for application, administer the toxicants under conditions whereby negative impacts are avoided, remove fish in a manner that no harm will come to public health or safety, and collect data to prepare the fish kill report which is kept on file at the Department.

"To adopt the proposed amendment will duplicate a similar procedure already enforced by the Department of Conservation, discourage impoundment owners from seeking assistance in developing or maintaining a good sport fishery resource, and create an additional waiting period which could cause severe deterioration of Illinois' fishery resources. Therefore, the Department of Conservation opposes adoption of the proposed amendment to Rule 203(h), Chapter 3 of the Water Control Regulations, and recommends that the permit and application procedures presently being used by the Department of Conservation be adopted by the Pollution Control Board to control the use of fish toxicants in Illinois in lieu of the EPA variance procedure and the proposed amendment."

Mr. Stinauer further testified that Conservation had issued permits since 1959 and that during the past nine years (prior to 1975) 1,325 fish toxicant permits had been issued and that from 1963 through 1972, inclusive, 25,418 acres of water had been treated.

Mr. James B. Park, a registered professional engineer and supervisor of the Standards Unit of the Division of Water Pollution Control, testified that the Agency agreed that a permit program was desirable. ". . . the present variance procedure creates cumbersome paper work problems for all involved and may delay application of toxicant beyond the ideal season for its use" (R. 56). He further testified that the Agency had reviewed Conservation's permit program and found ". . . it incorporates the safeguards for the aquatic systems expressed in R75-7 . . ." (R. 56) and he proposed the alternate wording to proposed Rule 203(h) ". . . except for applications of U.S. EPA approved piscicides by or under the supervision of the Department of Conservation, State of Illinois, pursuant to Chapter 56, Ill. Revised Statutes, Section 1.1 et seq., as amended; provided, however, that no piscicide shall be applied to any public and food processing water supply, as defined in Rule 104 of this Chapter, without prior notice to the Division of Public Water Supply of the Agency" (R. 57).

Dr. Odell questioned Mr. Park regarding safeguards for water quality under the revised language above. Mr. Park responded, in pertinent part, ". . . the United States Environmental Protection Agency had done extensive work in determining the application levels, precautions and the persistence of the particular chemical . . . I believe the Agency's only concern in this respect for notice is that we are absolutely assured that the operator of the public water supply is intimately aware of the activity that's being undertaken and is prepared for the possibility of some freak accident during the application. We have never encountered one" (R. 59, 60).

Mr. Stihauer testified that under a dual permit system ". . . there would be some people that just would not want to go through all this procedure and would let their fish population continue to deteriorate" (R. 80).

Mr. W. S. (Bill) Brenneman, Illinois Power Company, appeared ". . . as a taxpaying citizen and employee of a major taxpaying corporation . . ." to protest the amendment as it ". . . will only add needless 'red tape' and, of course, costly employees to the EPA staff." He proposed the following change, "203(h) aquatic toxicants, used to control or eradicate undesirable flora or fauna, and which are not toxic to humans, are excluded from regulations" (R. 88).

Mr. David J. McGinty, a fisheries biologist with the Forest Preserve District of Cook County, described his operations and use of pesticides emphasizing management problems with the various mandatory conditions which were proposed at that time. His experience stressed the need for formulations approved for aquatic use. He related an experience in Indiana using rotenone to do a total river kill for restocking. ". . . when we went to stop it we stopped the rotenone, but we did not stop the carrier . . . after a number of water samples and a number of tests we found out it was the carrier that was toxic" (R. 181, 182). It was also brought out in his testimony that he did not obtain a Conservation permit to purchase his piscicides and he believed that anyone could purchase them from private distributors (R. 176). This point was clarified later in that Mr. McGinty stated that he ordered his chemicals from a New York based company and he knew of no private citizen who can do this (R. 220). Mr. Richard A. Rogers, a Conservation District fishery biologist, pointed out that Mr. McGinty held a Scientific Collector's Permit and it would be illegal for a private citizen to use drugs or chemicals to take fish (R. 207). He also stated the main supplier in central Illinois would not even sell to a fishery biologist from Eastern Illinois University without a permit.

Mr. Rogers detailed the procedures, precautions and forms used in applications of aquatic herbicides. In addition to the label information which gives directions for proper use and precautions (R. 234), publications are available from Conservation: "Aquatic Plants of Illinois" (Ex. 16); "Aquatic Weeds--their identification and methods of control" (Ex. 17). The latter booklet is available from County Extension Offices, SCS offices and from all district fishery biologists (R. 229). All fishery biologists who are recommending or applying aquatic herbicides are registered with the Department of Agriculture with a Public Pesticide Applicator's License in aquatic weed control (R. 233). There is no permit required to purchase herbicides as there is for piscicides (R. 235).

Mr. Roger D. Callaway, an environmental specialist in the Agency's Variance and Technical Analysis Section, testified that, if the Board were to require the Agency to provide a permit program, the Agency recommends that mandatory permit conditions be incorporated into a technical policy rather than into the proposed rule change (R. 236-240).

Dr. R. W. Larimore, Illinois Natural History Survey aquatic biologist, testified to clear up some confusion regarding the time for test procedures to determine the applicability of Rule 203(h). A report entitled "Duration of Tests to Determine Effects of Toxicants on Aquatic Organisms" prepared by Dr. Richard E. Sparks of the Illinois Natural History Survey dated July 18, 1975 was entered as Exhibit No. 8. Dr. Larimore pointed out that the two day (48-hr. TLm) or four day (96-hr. TLm) test period was used not for fish toxicants but for more-or-less chronic effects and therefore the 96-hr. TLm would be better to protect the total aquatic environment. Also as pointed out by Drs. Larimore and Sparks the 96-hour TLm has become almost a standard procedure (R. 270, Ex. 8). In general, TLms of 24 hours or less indicate short term effects; a median tolerance limit of more than 48 hours indicates long term effects. Bioassay of toxicities of unknown substances would normally be run so that plots of mortality vs. time intervals would yield a mortality curve of definite shape so that critical time periods and possible end points could be ascertained. Advantages of the 96-hr. TLm over the 48-hr. TLm were also suggested by the U.S. EPA Region V Administrator in a June 6, 1974 letter to the Governor approving Chapter 3 Regulations with amendments through June 28, 1973.

Public comment was received following publication of Dr. Odell's proposed final draft on September 5, 1975. Dr. Briceland's letter (September 19, 1975) restated the Agency's position that a permit system by the Agency for application of fish toxicants and aquatic herbicides even to public and food processing water supplies was unnecessary. He stated the Department of Conservation had administered their fish toxicant program for over fifteen years with no recorded instances of significant adverse impact, and adequate notice to the Agency of application to such waters would be sufficient. He also expressed concern about chronic toxicity and sub-lethal effects of the full range of aquatic herbicides. Director of Conservation Anthony T. Dean expressed departmental agreement with the amendment. Mr. W. S. Brenneman, Land Use and Conservation Supervisor, Illinois Power Company, stated a hearing should be held on aquatic herbicides. He felt that the promulgated regulation was unnecessary because: (1) applicators must be licensed by the State; (2) all pesticides must be approved by the Federal EPA; (3) the fish toxicants are essentially harmless except to target fish and (4) aquatic herbicides, properly applied, are harmless to people or aquatic fauna. He felt, as previously promulgated, the regulation would prevent timely applications, stating, "The need for applying a herbicide may become apparent overnight." A 45-day wait for a permit might render an application too late and valueless.

In a letter dated March 9 1976, Director Anthony T. Dean urged prompt approval of the amendment stating, ". . . the present required variance procedure is very time consuming and prevents the application of toxicants in a short time frame. In addition, it has severely curtailed rehabilitation of fishing waters and, as such, has adversely affected our fisheries management program." In a letter dated September 27, 1976, Mr. Robert Himel, President, Midas Midwest Inc. espoused the use of "controlled release" aquatic herbicides and other pesticides. He enclosed a favorable clipping from Chemical & Engineering News (September 28, 1975). Some of these formulations were reported to be especially effective in aquatic environments allowing application at much reduced rates and achieving control over relatively long periods of time. The limited availability of U.S. EPA approved slow release formulations to Illinois applicators may restrict recommendations for their use.

On September 23, 1976 the third hearing was held in Springfield, Illinois to gather further evidence on aquatic herbicides particularly on their toxicity to non-target organisms.

Dr. Hiltibran, Biochemist, Section of Aquatic Biology, Natural History Survey, explained some broad differences between terrestrial and aquatic herbicides (and algicides). Generally aquatic pesticides are applied to the water so that target and non-target species are equally exposed in contrast to terrestrial agents which can be selectively applied directly to target species (3R. 12)*. Aquatic herbicides to be effective must be much more toxic to target species than to other aquatic organisms. Dr. Hiltibran stated, "At the present time, many studies in which effects have been found usually require much higher rates than those suggested for aquatic plant control. ". . . in our investigation of the biochemical effects of pollutants we have investigated many aquatic herbicides, and if we found any effect, it was at a rate higher than the rates suggested for aquatic plant control" (3R. 13).

"Active" uptake concentrates applied agents within an organism while "passive" uptake indicates equal concentrations internal to and external to an organism. All the aquatic herbicides currently registered by the U.S. EPA are in the "passive" category at least by fish (3R. 15, 16). Residue data in Document 75-13 (Ex. 1, 9) support this conclusion.

Dr. Hiltibran felt there was a lack of understanding during the previous hearings of the processes by which a company obtained U.S. EPA registration of an aquatic herbicide. He had been working with "several different chemical companies" and outlined the generally submitted data: (1) two year feeding studies on two laboratory animals, usually the dog and rat; (2) the efficacy data; (3) disappearance of residue data; (4) fish toxicity data; (5) non-target organisms toxicity data and (6) data concerning the degradative products (3R. 21, 22). For many years these data appeared to be adequate. The publication of Silent Spring, the "DDT" story, the 2,4-D and 2,4,5-T defoliants in Vietnam, and accumulated scientific data indicated additional investigations were necessary prior to the use of pesticides. The detailed information can be found in Federal Register, Volume 40, "Guidelines of Pesticide Registration." "Thus, before the registration of a pesticide is granted at the present time, the possible accumulation of the parent compound and its degradative products within the aquatic and terrestrial environment, their possible mutagenic and tetragenic effects; their toxicity and effects on non-target plants and animals are estimated. These data are in addition to the data cited above."

* Because of error this hearing was not numbered consecutively' therefore, the "3" is used to differentiate from the same page number appearing in the first hearing.

"Thus, there is a large body of data available concerning a chemical agent, which has been evaluated by scientists from several disciplines prior to the registration and prior to the time investigators are permitted to evaluate the chemical agent under field conditions" (3R. 24, 25).

Based on his own work and published data concerning a frequently suggested criticism that herbicide use increases water nutrient content, Dr. Hiltibran concluded that aquatic herbicides only alter the timing of the natural nutrient recycling process. The nutrients thus made available enhance growth of other aquatic fauna including fish. In addition to a number of other benefits of aquatic herbicide use cited, Dr. Hiltibran pointed out the quiet water surface provided by aquatic plants makes an excellent mosquito breeding place with its attendant human health aspect (3R. 25-28).

In the hearing it was brought out that only licensed applicators will be able to procure restricted pesticides subsequent to October 1, 1977 (3R. 33-35). Fortunately, the licensing process has been used in Illinois for many years, but had not, previous to 1977, been mandated to individual owners making applications for their own operations.

They could, of course, have attended the Custom Spray Operators Training School and taken the qualifying tests, but they were not previously required to have any formal training to purchase and apply pesticides.

Up to this point, two groups within the "pesticide" area; namely, piscicides and aquatic herbicides (including algicides) had been discussed. Dr. Hiltibran was asked if other pesticides might be needed such as molluscicides. He responded, "Oh, yeah. In fact there has been a need for molluscicide in the control of snail and swimmer's itch." ". . . in fact -- I keep bumping into this. People keep calling me for information . . .". "And particularly in -- along the northern tier of counties . . . because they have a problem there" (3R. 36, 37).

The aforementioned economic impact report (IIEQ Doc. No. 76/16) prepared by Drs. Sonia and Robert Vogl and sent to the Board on August 5, 1976 was the subject of two hearings: (1) in Springfield, Illinois on September 23, 1976 and (2) in Carbondale, Illinois on October 19, 1976. Dr. Sonia Vogl testified at both hearings.

As was brought out in the hearings, many costs were difficult to quantify; it was equally difficult to identify and quantify the benefits. Only fifteen petitions for variance

for fish kills were received by the Board during 1974 and 1975 and only one case went to hearing (ER.* 5). This case, City of Jacksonville, PCB 74-92, 13 PCB 631 (September 19, 1974), was determined to cost \$2,385.88: The applicant's cost was determined to be about \$1500; the Board's cost for a hearing officer and notice fees totaled \$143.11; Agency expenses totaled \$943.50; Conservation expenses were \$655.38 (ER 6, 7, 8).

If a variance did not go to hearing, the estimated cost was \$995.50 plus unidentified expenses to the Board. When applying toxicants to public water supplies (Agency permit required) under the proposed rule change, costs would be: \$115 for the applicant and to the Agency \$123. Dr. Vogl stated this total (\$238) would be the cost under the proposal; however, this ignores the cost to Conservation (which would be less than determined in the above case). Dr. Vogl's benefit/cost comparisons used this figure which is in error. In spite of the difficulty in assigning costs, it must be concluded there are no adverse cost implications.

During 1974 and 1975 a total of 281 permits to purchase fish toxicants (ER. 51) and 79 permits to apply aquatic herbicides (ER. 52) were issued by Conservation. The Board received 15 petitions for variance for toxicants and 19 petitions for herbicides during this period.

The principal impact of the rule change will be felt by the owners of the 75,565 private lakes and the 623 publicly owned waters. Indirect benefits can be described but not quantified.

Section 13(a)(6) of the Act states that any 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 . . .".

The proposed rule change was submitted to the Committee on November 1, 1976 and the members submitted a proposed final draft on February 22, 1977; the Board authorized the publication of this draft for public comment on March 3, 1977. It was published in the Environmental Register, No. 144, March 21, 1977. Support for the proposed changes was submitted by experts from the groups making up the Committee: Harvey J. Dominick,

* Designation for Economic Impact Record.

Illinois Department of Public Health; Vincent M. Russo, Illinois Department of Agriculture, Dr. Stevenson Moore III, University of Illinois, and Thixton B. Miller, Illinois Department of Conservation. Dr. Hiltibran, Natural History Survey, had testified previously and the Agency was represented at all the hearings.

The statements made by these experts were all in agreement with Dr. Hiltibran's testimony with regard to the reliance that could be placed on U.S. EPA label information for registered pesticides. Dr. Moore stated in this regard:

"They are the only agency that has sufficient information to make this judgment. Standards that must be met for registering a pesticide are set by law. Usually there is 100-fold safety margin built into all pesticide usage registrations. In contrast, drugs or medicines work on about a 10-fold safety margin."

The addition of "insecticides and other pesticides" was primarily added to allow control of mosquitoes, gnats and other aquatic flies. Each expert mentioned the necessity for Public Health and other agencies having responsibility for control of biological agents to be able to move quickly, as these vectors give very little lead time under optimum growth conditions. Dr. Moore stated, ". . . in Illinois. Currently about 9,000 commercial applicators and about 23,000 private applicators have been trained."

Public comment after the last publication concerned the insertion of the word "public" with "water supplies" and a comment on the meaning of the word "pesticide". The word "pesticide" as herein used means any substance or mixture of substance intended for preventing, destroying, repelling, or mitigating any insects, rodents, nematodes, fungi, or weeds or any other form of life declared to be pests. Thus, all more specific terms such as insecticide, herbicide, algicide, molluscicide, fungicide, rodenticide, etc. including plant regulators, defoliant or desiccants are known generally as "pesticides".

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion was adopted on the 7th day of July, 1977 by a vote of 4-0.

Christan L. Moffett pk
Christan L. Moffett, Clerk
Illinois Pollution Control Board