

ILLINOIS POLLUTION CONTROL BOARD
May 24, 1979

IN THE MATTER OF:)
)
AMENDMENTS TO THE WATER POLLUTION) R77-12
REGULATIONS OF THE ILLINOIS) DOCKET A
POLLUTION CONTROL BOARD)

OPINION AND ORDER OF THE BOARD (by Mr. Young): (Final Order)

This matter comes before the Board on a proposal filed by the Environmental Protection Agency on May 10, 1977, to amend numerous provisions in Chapter 3: Water Pollution Regulations. On July 5, 1977, the Hearing Officer entered an Order which divided the subject matter of R77-12 into four dockets. The Order stipulated that Docket A would include the following proposed amendments to Chapter 3:

Part I: In Rule 104 to amend the definitions of "Combined Sewer," "Combined Sewer Service Area," "Dilution Ratio," "Sewage," and "Sewer" and to revise "Analytical Testing" procedures in Rule 105;

Part II: To incorporate specific effluent standards for secondary contact waters in this State and to establish acute toxicity levels in the same waters for toxic substances not listed in the effluent standards;

Part V: To delete the monitoring and reporting requirements from Rule 501 for dischargers of mercury to waters of this State;

Part VI: To amend Rule 602(a) to permit construction, extension and rehabilitation of combined sewers within existing "Combined Sewer Service Areas;"

Part VIII: To add Rule 803 to make the disposal requirements from watercraft consistent with the preemptive directives of the Federal Water Pollution Control Act, 33 U.S.C. par. 1251 et seq. (Clean Water Act) and regulations promulgated by the Administrator of the USEPA;

Part X: To delete rules in Part X which required the Agency to submit to the Board an annual report on waste dischargers under Rule 1001 and dischargers to file a project completion report with the Agency under Rule 1002.

In the hearings that followed, the Agency also proposed to revise Proposed Rule 205(e) to include the revisions adopted by the Board concerning water quality amendments for cyanide in R74-15, -16 and for hexane solubles in R74-1, -8, -9. The Agency has also recommended that the project completion schedule requirements in Rules 404(f)(ii)(D) and 602(d)(6) be deleted if the Board were to delete the same requirements in Rule 1002 (R. 203-04).

Notice of the original Agency proposal was published in the Environmental Register #124 on June 9, 1977. Public hearings pursuant to Section 28 of the Environmental Protection Act were held in the following locations:

August 22, 1977	Chicago, Illinois
August 23, 1977	Springfield, Illinois

In accordance with Section 6 of the Environmental Protection Act, the then Illinois Institute of Environmental Quality (now the Illinois Institute of Natural Resources) submitted a study to the Board on June 30, 1978, concerning the economic impact of the proposed amendments in Docket A. The study entitled, "Economic Impact of Proposed Amendments to Water Pollution Regulations, R77-12, Docket A", IIEQ Document No. 78/23 (Exhibit #A-11) was prepared by Harza Engineering Company.

As required by Section 27(b) of the Act, economic impact hearings were held on the study on the following dates:

September 12, 1978	Springfield, Illinois
September 14, 1978	Chicago, Illinois

At the conclusion of the hearings, the Hearing Officer held the record open to accumulate materials pertinent to several of the proposed amendments and to receive materials due from the Agency and other parties to complete the record. On December 8, 1978, the Hearing Officer closed the record on this Docket.

On March 1, 1979, the Board adopted a proposed final opinion and order and authorized that the proposed final order be submitted to the Secretary of State for publication in the Illinois Register to provide notice and to initiate

a 45-day public comment period as required by the Illinois Administrative Procedure Act (Ill. Rev. Stat., Ch. 127, §§1001 et seq.). Notice of the proposed final order was published in the Environmental Register #191, March 12, 1979, and in Volume 3, Issue 11 of the Illinois Register, March 16, 1979, pages 189 through 205.

During the public comment period (March 16, 1979 through April 30, 1979), the Board received questions and comments from the Joint Committee on Administrative Rules. After meeting with the staff, the Joint Committee received the proposed amendments in Docket A at hearing on April 24, 1979, without objection or comment. The Board also received proposals from the Joint Committee and from the Illinois Environmental Protection Agency to make minor revisions in the text of the proposed amendments. After reviewing the proposals for revision, the Board will make the appropriate changes as recommended.

THE PROPOSED AMENDMENTS

The amendments to Chapter 3: Water Pollution, of the Pollution Control Board Rules and Regulations proposed in R77-12, Docket A, although diverse in content, are primarily intended to clarify existing rules, to make other rules consistent with federal guidelines and to eliminate reporting and other requirements which have outlived their usefulness. To facilitate discussion of these amendments, the Board will group the proposals in Docket A into six categories listed below:

1. Proposed Sewer and Sewage Definition Changes
2. Proposed Combined Sewer Regulation Changes
3. Proposed Secondary Contact Water Quality Standard Changes
4. Proposed Revision to Dilution Ratio Definition
5. Proposed Changes to Meet Federal Guidelines
6. Proposed Deletions of Reporting and Other Requirements.

PROPOSED SEWER AND SEWAGE DEFINITION CHANGES

The Agency has proposed amendments to the definitions of "sewage" and "sewer" to clarify and limit the scope of these terms and to avoid possible confusion with other definitions of this Chapter and the Act.

Proposed definitions for "sewage" and "sewer" read:

"Sewage" means water-carried human and related wastes from any source.

"Sewer" means a conveyance or system of conveyances constructed and operated for the purpose of collecting and transporting wastewater or land runoff, or both.

According to the Agency, revisions in "sewage" will eliminate any confusion between the terms "sewage" and "wastewater" in Chapter 3. By definition, "wastewater" includes both sewage and land runoff while "sewage" as proposed will be limited to human and related wastes.

The Agency's recommended amendment to "sewage" is intended to clarify and limit the scope of this definition. The Agency has claimed that a broad interpretation of both "wastewater" and "land runoff" coupled with a liberal definition of "conduit" could result in the classification of practically all waters in this State as sewers (R. 73-74). As presently proposed, the Agency claimed that the definition of "sewer" will allow conveyances to be classified as sewers only if designed for the purposes of wastewater and land runoff.

Any amendment to "sewer" must also be considered with the definition of "waters" in Section 3(o) of the Environmental Protection Act which reads:

"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.

Since its beginning, the Board has utilized the definition of "waters" of the State in the manner intended by the Act, while making specific provisions in the Board's regulations to exempt sewers and treatment works from the water quality standards of this Chapter. In early decisions the Board held:

(I)f the discharge is to a ditch that is essentially a part of the treatment or discharge facilities, it may be unprotected; the law does not say sewage cannot be dumped into sewers. Koppers, PCB 71-365, 1 PCB 579, 580 (1971).

However, the Board has also found:

We do not think the law allows a stream to be deprived of all protection against pollution simply by the construction of concrete beds, intermittent covers, and sheet pilings. If it did the law would provide no protection against the transformation of fine streams into festering open sewers. City of Urbana, PCB 71-365, 5 PCB 331, 337 (1972).

In determining a definition for "sewer," the Board finds that any stationary conveyance will constitute a sewer if it has been designed and constructed for the purposes of wastewater and land runoff. Where this determination would remove a natural watercourse from the protection of the water quality standards, the historical drainage patterns of the area will predominate over the actual purpose of the construction.

The Board will hereby accept the Agency's proposed definition with the following revisions:

"Sewer" means a stationary means of transport or stationary system of transport excluding natural waterways, constructed and operated for the purpose of collecting and transporting wastewater or land runoff, or both.

The Board revision is intended to answer concerns that the Agency proposal could be interpreted to include sludge conveyances and such rolling stock as trucks, rail cars, conveyors and barges in its definition (R. 158, 174-75). The Board will include this addition to correct the ambiguity and intends that the term "transport or system of transport" be limited to stationary facilities such as pipes, conduits, open channels and ditches and expressly excluding natural waterways, however modified.

PROPOSED COMBINED SEWER REGULATION CHANGES

The proposed amendments under this heading include a change in definition of "Combined Sewer," the addition of "Combined Sewer Service Area," and the proposed changes to Rule 602(a). The definition proposals of "Combined Sewers" and "Combined Sewer Service Area" are as follows:

"Combined Sewer" means a sewer designed and constructed to receive both wastewater and land runoff.

"Combined Sewer Service Area" means a specific geographical drainage area served entirely by a combined sewer system. Areas served by separate sewer systems which enter the combined system are not included. Undeveloped areas within a combined sewer service area may be included in that area if deemed appropriate by the Agency.

By definition, "Combined Sewer" will include sewers designed and constructed to receive wastewater and land runoff. Sewers constructed as sanitary sewers would not be permitted to receive storm runoff from catch basins or any other conveyance.

The definition of "Combined Sewer Service Area" as proposed by the Agency would allow the installation of new combined sewers only if within the geographical area presently served by the combined sewer system.

The Board has reviewed all entries and proposed revisions to these definitions in the record. "Combined Sewer" will be adopted as proposed while "Combined Sewer Service Area" is accepted with the following revision:

... Undeveloped areas within a combined sewer service area may be included in that area if deemed appropriate by the Agency pursuant to the guidelines in Rule 602(a).

The Agency has also proposed revisions to Rule 602(a) as follows:

602 Combined Sewers and Treatment Plant Bypasses

(a) The expansion of existing or establishment of new combined sewer service areas is prohibited, except where sufficient retention or treatment capacity is provided to ensure that no violation of the effluent standards in Part IV of this Chapter occurs.

On March 7, 1972, the Board adopted Rule 602(a) as proposed by the Agency in R70-8 which imposed a complete ban on new combined sewer systems and prohibited expansion of combined systems without a variance granted pursuant to Section 35 of the Act. While Rule 602(a) has effectively stopped the expansion of combined sewers into new communities in this State, the Agency claimed that this Rule has seriously frustrated expeditious efforts to correct combined sewer

problems and to implement service extensions into previously unsewered areas within combined sewer service areas. Under the proposed amendment to Rule 602(a), the Agency would be provided the latitude to approve permits for combined sewer rehabilitation and construction of extensions to combined sewers upon a showing of sufficient retention or treatment capacity (R. 17-23, 34-39).

The Board is concerned with the delays faced by owners and operators of combined systems who wish to extend service to pockets within their system. See Mary Ann Nowak, PCB 76-193, 24 PCB 245 (1976) and Springfield Convention Center, PCB 76-267, 24 PCB 459 (1976). Rule 602(a) will be revised to provide the Agency with criteria necessary to properly evaluate and approve permit applications for combined sewer rehabilitation and extensions. Proposed Rule 602(a) will be amended as follows:

602 Combined Sewers and Treatment Plant Bypasses

(a) The expansion of existing or establishment of new combined sewer service areas is prohibited, except where the Agency has determined from the permit application the following:

1. The combined sewer service area has adequate treatment or retention capacity to ensure that the effluent limitations of Part IV of this Chapter and the provisions of the Act are not violated;
2. Any anticipated increased flow will not overload connecting segments of the combined sewer system;
3. Increased flow shall not aggravate combined sewer overflow problems; including, but not limited to, combined sewer surcharges, basement back-ups and street flow;
4. The new combined sewer service area will be tributary to an existing combined sewer system.

Under these criteria, the permit would be denied unless the applicant demonstrates that the increased flow would not cause pollution problems within its system in addition to a showing that the flow will receive complete treatment. Should dispute arise over an Agency determination, the applicant may seek relief before the Board pursuant to a Section 40 Petition.

PROPOSED SECONDARY CONTACT WATER QUALITY STANDARD CHANGES

The proposed revisions to Rule 205 are designed to incorporate meaningful standards for secondary contact waters in Illinois. Under this proposal, Rule 205(e) would be amended to enumerate standards for specific constituents in secondary contact waters while a proposed Rule 205(g) would set acute toxicity limits for toxic substances not listed in Rule 205(e). In combination, the rules are intended to set standards to minimize acute toxic stresses from chemical constituents and toxic substances for indigenous aquatic life in secondary contact waters and eliminate any potential impacts on downstream general use waters.

In proposed Rule 205(e), the Agency has incorporated most of the constituents listed as effluent quality limitations in Rule 408(a) of this Chapter. The Agency has also proposed an ammonia nitrogen limitation with a 2.5 mg/l and 4.0 mg/l summer/winter standard derived from Rule 406 of Chapter 3. Also included are the more lenient arsenic and barium levels, and the total dissolved solids (TDS) requirement from the general use standards of Rule 203(f). The Agency has omitted the total suspended solids (TSS) requirement for secondary contact waters and has not included boron, chloride and sulfates because there is no general use effluent limitation for these constituents.

The Agency claimed that the BOD₅/suspended solids requirements are inappropriate water quality standards and should not be included in the Rule 205(e) table. The Agency has found that BOD₅ provides an index for the potential impact of a particular waste, but is not an indicator of water quality. According to the Agency, suspended solids measurements are quite variable and dependent upon the fluctuations in natural stream velocity and other external conditions in or on the waters (R. 11, 12). If the Board were to omit BOD₅/SS requirement, secondary contact water would be protected by the dissolved oxygen standard of Rule 205(c).

While there was general support for most provisions in Rule 205(e), the Metropolitan Sanitary District of Greater Chicago (MSDGC) took issue with the proposed level for total dissolved solids (TDS). The Agency proposed the 1,000 mg/l general use water quality standard as an alternative to the Rule 408(b) effluent requirement which measures compliance in terms of background TDS concentration levels. The Agency claimed that some TDS limitation is necessary to protect indigenous aquatic life in secondary contact waters from toxic stress; the MSDGC responded that aquatic life in secondary contact waters could tolerate higher TDS levels than the general use standard (R. 13, 122).

In support of their position, the MSDGC submitted numerous references in Exhibit #A-14 which indicate that fresh water indigenous aquatic life may withstand resultant osmotic pressures derived from dissolved solids in excess of 1,000 mg/l. According to McKee and Wolf in Water Quality Criteria, Pub. #3-A, 1963 at page 184, fresh water fish and aquatic life would experience no interference in waters containing 2,000 mg/l dissolved solids. In Water Quality Criteria, a Report to the Secretary of the Interior, Fed. Wat. Poll. Centr. Admin., dated April 1, 1968, on pages 39-40, the Report stated that for those dissolved solids which are relatively innocuous, an equivalent concentration of 1,500 mg/l sodium chloride should not be exceeded in waters where diversified animal populations are to be protected. In the latest edition of Quality Criteria for Water, 1976 published by the USEPA at pages 205-209, the criterion for total dissolved solids in fresh water was omitted thus limiting TDS water quality criteria to a domestic water supply standard.

The Board will accept the proposed table in Rule 205(e) with the following revisions:

1. The Board will not include BOD₅/suspended solids requirements for secondary contact waters and will amend the "Total Dissolved Solids" level to 1,500 mg/l to reflect the weight of evidence in the record.
2. The Board will also modify this table to include the adopted revisions in R74-15, -16 (September 7, 1978) for cyanide in secondary contact waters and a modified version of R74-1, -8, -9 (November 23, 1977). The amended table will read as follows:

<u>Constituent</u>	<u>Storet Number</u>	<u>Concentration (mg/l)</u>
Cyanide	00720	0.10
Oil, <u>fats</u> , and <u>greases</u>	00550, 00556 or 00560	15.0*

*Oil shall be analytically separated into polar and non-polar components if the total concentration exceeds 15 mg/l. In no case shall either of the components exceed 15 mg/l (i.e., 15 mg/l polar materials and 15 mg/l non-polar materials).

In this revised table, the asterisked reference sets a maximum concentration for oil, fats and greases.

Rule 205(g) as proposed by the Agency is similar in approach to the acute toxicity limits set for general use waters in Rule 203(h) of this Chapter. The proposed rule would establish a water quality level 1/2 the 96-hour median tolerance limit for toxic constituents not listed in Rule 205(e). The Agency claimed that the proposed rule is intended to minimize toxic stress in secondary contact waters which might cause nuisance fish kills and to eliminate the impact of toxic substances in downstream general use waters (R. 206). The Board will adopt the proposed rule and incorporate it into Chapter 3 as Rule 205(h).

PROPOSED REVISION TO DILUTION RATIO DEFINITION

The Agency has proposed the following amendment to "Dilution Ratio:"

"Dilution Ratio" means the ratio of the seven-day once in ten year low flow of the receiving stream or the lowest flow of the receiving stream when effluent discharge is expected to occur, whichever is greater, to the average flow of the treatment works for the design year.

Under the existing rule, treatment facilities in Illinois are designed to treat wastewater based upon the seven-day low flow event in the receiving stream which occurs at least once in the decade. The Agency stated that the definition creates problems for dischargers to intermittent streams in complying with the deoxygenating waste requirements of Rule 404. Furthermore, facilities designed to treat only storm wastewater must meet the Rule 404 BOD₅/suspended solids requirement based on the seven-day ten year low flow regardless of the state of the receiving stream when the discharge is expected to occur (R. 7, 8).

The proposed changes would allow "Dilution Ratio" to be based on the ratio of either the seven-day once in ten year low flow of the receiving stream or the lowest flow of the receiving stream when the effluent is expected to be discharged. The Agency claimed that this would allow controlled discharges of wastewater from municipal and industrial facilities, particularly those maintaining lagoons having very large storage capability compared to the daily inflow.

The Board finds that the proposed addition provides relief for dischargers to intermittent streams and for storm wastewater treatment facilities which is consistent with the objectives of the Act and the Board regulations. The Board will accept the definition of "Dilution Ratio" as proposed by the Agency.

PROPOSED CHANGES TO MEET FEDERAL REQUIREMENTS

In this docket, the Agency has recommended that the analytical testing guidelines of Rule 105 and the waste disposal requirements for watercraft in Rule 801 be amended to comply with federal directives. As revised, Rule 105 establishes the USEPA analytical practices and procedures for NPDES permit analyses and other testing procedures required by Chapter 3.

The Board will adopt Rule 105 as follows:

105 Analytical Testing

All methods of sample collection, preservation, and analysis used in applying any of the requirements of this Chapter shall be consistent with USEPA's current manual of practice or with other procedures acceptable to USEPA and the Agency.

The recommended change in the watercraft waste disposal requirements of Part VIII involves the addition of a Rule 803 and is intended to "dove tail" the Rule 801 requirements for disposal of waste from watercraft with Section 312 of the Clean Water Act which prohibits the State from regulating any marine sanitation device or sanitary discharges to certain waters of this State. The federal regulations appearing at 40 CFR Part 140 and at 33 CFR Part 159 were promulgated pursuant to Section 312 of the Clean Water Act to regulate marine sanitation devices and watercraft discharges to navigatable waters.

The Agency claimed that under USEPA regulations, states are preempted from adopting rules to control discharges from Coast Guard certified marine sanitation devices to coastal waters and estuaries, the Great Lakes and interconnected waterways, freshwater lakes and impoundments accessible through locks and other waters which are navigatable interstate by vessels subject to the regulation (40 CFR 1403) (R. 24-26).

The Board will adopt the proposed rule as follows:

803 Statewide Application

The Rules in this Part apply to all waters of the State unless preempted under Section 312 of the Federal Water Pollution Control Act, 33 U.S.C. par. 1251 (Clean Water Act).

PROPOSED DELETION OF REPORTING AND OTHER REQUIREMENTS

Lastly, the Agency has proposed in Docket A to remove the reporting requirements for dischargers of mercury in Rule 501. Also recommended for deletion were the Agency report requirements on waste discharges in Rule 1001, the dischargers' project completion report of Rule 1002 and the other provisions in Rules 404(f)(ii)(D) and 602(d)(6) of this Chapter.

In testimony to the record, the Agency stated that the annual reporting requirement of Rule 501 for mercury dischargers is not an effective means of control because the regulation failed to set a limit on the total loading of mercury to be discharged and did not provide an effective means for verifying the data. The Agency further claimed that the existing effluent limitations and permit effluent reporting requirements established an effective means for control of mercury and that the number of users of mercury have further declined in the past three years (R. 15, 115-17).

The Agency has recommended the deletion of Rule 1001, requiring submission to the Board of an annual waste discharge report. The Agency claimed, and the Board confirms, that report is rarely consulted or used and that much of the same information is also available in the Phase I basin plans required under the Clean Water Act. Other information including discharge inventories, effluent data and NPDES permit compliance schedule data are also available for retrieval in Agency data banks (R. 24-26).

The Agency has also proposed to delete Rule 1002 requirement for dischargers to submit to the Agency a project completion schedule on upgrading its treatment facilities and meeting applicable standards. According to the text of the Rule, the deadlines for filing project completion schedules are now past (R. 24-26).

Since the Agency has proposed the deletion of project completion schedule reports, it has also recommended the removal, in its entirety, of the provision in Rule 602(d)(6) for time extensions to the project completion reports. The Agency claimed that dischargers once covered under project completion schedule requirements are currently regulated under the NPDES permit program and the schedules are now covered by NPDES permit conditions (R. 95-6, 204).

The Board finds that the requirements of Rules 501, 404(f)(ii)(D), 602(d)(6), 1001 and 1002 have served their respective purpose and may be deleted as the Agency has requested.

ECONOMIC IMPACT OF THE PROPOSED
AMENDMENTS AND ADDITIONS

The Illinois Institute for Environmental Quality (now Natural Resources) performed a study on the economic impact of these proposed amendments to Chapter 3: Water Pollution Regulations pursuant to Section 6(d) of the Act. This study, "Economic Impact of Proposed Amendments to Water Pollution Regulations R77-12, Docket A" was prepared by Harza Engineering Company and entered into the record as Exhibit #A-11 at the September 11, 1978, hearing in Springfield, Illinois. The Author of the study, Dr. Mirza Meghji, divided the proposed revisions into five categories; the Board will utilize the same six categories as before to discuss the economic impact of these diverse amendments.

1. Proposed Sewer and Sewage Definition Changes

These changes which clarify the distinction between sewers and natural watercourses will impose no changes in treatment requirements or water quality. However, the Board anticipates that there will be some small savings in administrative expense since the proposed definitions were adopted in a manner consistent with the Agency's recommendation. In summary, there are no adverse economic or environmental impact from these revisions.

2. Proposed Combined Sewer Regulations Changes

The Author of the Economic Impact Study analyzed the impact of these changes primarily in terms of eliminating the need for a variance when constructing a combined sewer in a combined sewer service area (Exhibit #A-11, 4-2 - 4-6; R. 196). Total annual savings were estimated at \$14,000. In the study, two important questions raised were the size of the combined sewer service area (R. 216) and the potential for development in these service areas (R. 32). The Agency indicated that these questions would be considered before issuing the permit (R. 32-33). Furthermore, Agency testimony indicated that catch basins attached to sanitary sewers would have to be removed. While this matter was not considered in the Economic Impact Study, the Agency has claimed that removal of catch basins would be tied to the availability of grant funds (R. 38-39).

3. Proposed Secondary Contact Water Quality Standard Changes

The Economic Impact Study analyzed a number of the proposed constituents in Rule 205(e) including the barium, arsenic and total dissolved solids. According to the study, relaxing the total barium and arsenic concentrations to the general use water quality standard will not result in stream degradation since effluent limitations will remain unchanged (Exhibit #A-11, 3-2 - 4-6, R. 199). Similarly, the 1500 mg/l TDS standard will not produce any immediate costs or benefits. The study indicated that no present discharge to secondary contact waters will cause a violation of this proposed TDS standard adopted by the Board (Exhibit #A-11, 5-2 - 5-9).

Rule 205(h) adds a general limitation on toxic substances. The Agency has indicated that the proposal will not provide complete protection to all aquatic organisms found in secondary contact waters; however, the proposed limitation is intended to "... assure that no nuisance fish kills would occur in these secondary contact waters, and also assure that the impact of these waters on general use waters would be minimized" (R. 206). There is no quantification of this benefit in the study. Estimating the economic impact of proposed Rule 205(h) is difficult since the proposal covers a potentially large number of toxicants. The Author of the study indicated that control costs could not be estimated "... because the presence and concentrations of these substances in the discharges are unknown." (Exhibit #A-11, 6-3.) The Board notes that USEPA is establishing effluent limits for 65 toxic substances (Exhibit #A-11A). Dischargers will be required to meet these limits independent of the proposed Rule 205(h); the costs of meeting those effluent limitations is not attributable to this regulation. Future control costs of unknown amounts attributable to this regulation would be the control costs required to meet a secondary water quality standard for a substance that is not one of the 65 substances for which USEPA has formulated an effluent limit. However, it is not anticipated that this regulation would impose additional control costs for any of the 65 substances (R. 214-216).

4. Proposed Revision to Dilution Ratios

This proposed change would result in treatment costs savings for dischargers that could qualify for less stringent effluent requirements under current Rule 404 of Chapter 3: Water Pollution Regulations. The study identified three types of facilities that could benefit from this type of change: industrial wastewater treatment facilities with controlled discharge capability; domestic wastewater treatment facilities with controlled discharge capability and treatment facilities which treat runoff during storm events (Exhibit #A-11, 4-7).

One industrial facility was identified and it was estimated that the facility would save a capital investment of \$3 million under the proposed definition. An estimate of potential savings to the second group domestic treatment facilities, was made by first calculating the capital and operating costs of replacing 105 domestic treatment facilities with equipment designed and operated to meet effluent limitations of 10 mg/l BOD₅ and 12 mg/l suspended solids. These costs were then compared to the cost of replacement equipment designed and operated to meet limitations of 30 mg/l BOD₅ and 30 mg/l suspended solids. The difference was found to be \$40 million in capital costs and \$6.7 million in annual operating costs (Exhibit #A-11, 4-9 - 4-12). This estimate of potential savings assumed "optimum conditions" (R. 209). Actual savings would probably be less; no estimate was made of the number of domestic treatment facilities that actually could go to a controlled discharge.

No estimate was made of the potential savings to the third group, facilities treating storm runoff. This was due to the lack of readily available data concerning the number, size and operation of these dischargers (Exhibit #A-11, 4-10).

5. Proposed Changes to Meet Federal Guidelines

Proposed Rule 105, Analytical Testing, will have little, if any, economic impact (R. 234-235). Similarly, Rule 803 has no impact.

6. Proposed Deletions of Reporting and Other Requirements

The proposed deletion of Rule 501(b) would result in some savings to those who would normally file such a report to the Agency (R. 234, 236-237); this is the only anticipated impact.

The proposed deletion of Rule 1001 would relieve the Agency of its duty to file an annual waste discharge report. This is estimated to save the Agency \$15,000 initially and \$5,000 annually (R. 233). Rule 1002 is obsolete and its deletion will have no economic impact.

Much of this regulatory change will have little or no economic impact. The greatest potential for savings in control costs results from the change in the "Dilution Ratio" definition. The greatest potential for increases in control costs results from the secondary water quality standards; some costs also may be incurred if removal of catch basins to sanitary sewers is mandated. These two potential costs, if incurred, would have some adverse economic impact; however, comparable environmental benefits, admittedly unquantified, would also accrue. On balance, the rest of the regulation has no adverse economic impact.

FINDINGS AND CONCLUSIONS

The Board has reviewed the record in this proceeding and finds that the procedural requirements of the Act and the Board Rules regarding the adoption of the amendments and additions to Chapter 3: Water Pollution Regulations, have been fulfilled.

FINAL ORDER

The Board will hereby adopt these revisions to Chapter 3: Water Pollution Rules and Regulations and hereby authorizes that the adopted amendments be submitted for publication in the Illinois Register and Environmental Register to read as follows:

ILLINOIS POLLUTION CONTROL BOARD
RULES AND REGULATIONS

CHAPTER 3: WATER POLLUTION

1. The following Rule 104 definitions of Chapter 3: Water Pollution Regulations shall be amended to read:

"Combined Sewer" means a sewer designed and constructed to receive both wastewater and land runoff.

"Combined Sewer Service Area" means a specific geographical drainage area served by a combined sewer system. Areas served by separate sewer systems which enter the combined system are not included. Undeveloped areas within a combined sewer service area may be included in that area if deemed appropriate by the Agency pursuant to the guidelines in Rule 602(a).

"Dilution Ratio" means the ratio of the seven-day once in ten year low flow of the receiving stream or the lowest flow of the receiving stream when effluent discharge is expected to occur, whichever is greater, to the average flow of the treatment works for the design year.

"Institute" means the Illinois Institute of Natural Resources.

"Publicly Owned Treatment Works" means a treatment works owned by a municipality, sanitary district, county, or state or federal agency, and which treats domestic and industrial wastes collected by a publicly owned or regulated sewer system. Industrial treatment works which are publicly owned and financed by bond issues of public agencies are not included in this definition.

"Publicly Regulated Treatment Works" means those otherwise private companies which are regulated as public utilities engaged in the disposal of domestic and industrial wastes and regulated as such by the Illinois Commerce Commission, pursuant to an Act concerning Public Utilities, Illinois Revised Statutes 1977, Ch. 111 2/3, par. 1 et seq.

"Sanitary Sewer" means a sewer that carries wastewater together with incidental land runoff.

"Sewage" means water-carried human and related wastes from any source.

"Sewer" means a stationary means of transport or stationary system of transport, excluding natural waterways, constructed and operated for the purpose of collecting and transporting wastewater or land runoff, or both.

2. Rule 105 of Chapter 3: Water Pollution Regulations shall be amended to read:

Analytical Testing

All methods of sample collection, preservation, and analysis used in applying any of the requirements of this Chapter shall be consistent with USEPA's current manual of practice or with other procedures acceptable to USEPA and the Agency.

3. Rule 205 of Chapter 3: Water Pollution Regulations shall be amended by revising subpart "e" and by the addition of a new subpart "h".

- (e) Concentrations of other chemical constituents shall not exceed the following standards:

<u>Constituent</u>	<u>Storet Number</u>	<u>Concentration (mg/l)</u>
Ammonia Nitrogen (as N)	00610	2.5 (April-October) 4.0 (November - March)
Arsenic (total)	01002	1.0
Barium (total)	01007	5.0
Cadmium (total)	01027	0.15
Chromium (total hexavalent)	01032	0.3
Chromium (total trivalent)	01033	1.0
Copper (total)	01042	1.0
Cyanide (total)	00720	0.10

<u>Constituent</u>	<u>Storet Number</u>	<u>Concentration (mg/l)</u>
Fluoride (total	00951	15.0
Iron (total)	01045	2.0
Iron (dissolved)	01046	0.5
Lead (total)	01051	0.1
Manganese (total)	01055	1.0
Mercury (total)	71900	0.0005
Nickel (total)	01067	1.0
Oil, fats and greases	00550, 00556 or 00560	15.0*
Phenols	32730	0.3
Selenium (total)	01147	1.0
Silver	01077	0.1
Zinc (total)	01092	1.0
Total Dissolved Solids	70300	1500

*Oil shall be analytically separated into polar and non-polar components if the total concentration exceeds 15 mg/l. In no case shall either of the components exceed 15 mg/l (i.e., 15 mg/l polar materials and 15 mg/l non-polar materials).

- (h) Any substance toxic to aquatic life not listed in Rule 205(e) shall not exceed one half of the 96-hour median tolerance limit (96-hour TLM) for native fish or essential fish food organisms.
- 4. Rule 404(f)(ii)(D) of Chapter 3: Water Pollution Regulations shall be deleted.
- 5. Rule 501(b) of Chapter 3: Water Pollution Regulations shall be deleted.
- 6. Rule 602 of Chapter 3: Water Pollution Regulations shall be amended to read:

Combined Sewers and Treatment Plant Bypasses

- (a) The expansion of existing or establishment of new combined sewer service areas is prohibited, except where the Agency has determined from the permit application the following:
1. The combined sewer service area has adequate treatment or retention capacity to ensure that the effluent limitations of Part IV of this Chapter and the provisions of the Act are not violated;
 2. Any anticipated increased flow will not overload connecting segments of the combined sewer system;
 3. Increased flow shall not aggravate combined sewer overflow problems; including, but not limited to, combined sewer surcharges, basement back-ups and street flow;
 4. The new combined sewer service area will be tributary to an existing combined sewer system.

7. Rule 602(d)(6) of Chapter 3: Water Pollution Regulations shall be deleted.
8. Rule 803 of Chapter 3: Water Pollution Regulations shall be added and Part VIII amended to read as follows:

This part of the rules and regulations concerning water pollution controls the disposal of wastes from watercraft.

Statewide Application

The Rules of this Part shall apply to all waters of the State unless preempted under Section 312 of the Federal Water Pollution Control Act, 33 U.S.C. par. 1251 et seq. (Clean Water Act).

9. Rules 1001 and 1002 of Chapter 3: Water Pollution Regulations and Part X shall be deleted in its entirety.

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Final Order was adopted on the 24th day of May, 1979, by a vote of 5-0.



Christan L. Moffett, Clerk
Illinois Pollution Control Board