

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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SEP 15 2005

STATE OF ILLINOIS  
Pollution Control Board

BOARD OF TRUSTEES OF SOUTHERN )  
ILLINOIS UNIVERSITY GOVERNING )  
SOUTHERN ILLINOIS UNIVERSITY, )  
EDWARDSVILLE )

Petitioner, )

v. )

ILLINOIS ENVIRONMENTAL )  
PROTECTION AGENCY, )

Respondent. )

PCB 02-105  
(NPDES Permit Appeal)

NOTICE OF FILING

Dorothy Gunn, Clerk  
Illinois Pollution Control Board  
James R. Thompson Center  
Suite 11-500  
100 West Randolph Street  
Chicago, IL 60601

Joel A. Benoit  
MOHAN, ALEWELT, PRILLAMAN & ADAMI  
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Carol Sudman  
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Illinois Pollution Control Board  
1021 N. Grand Ave. East  
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Springfield, IL 62794-9274

Kim L. Kim  
Southern Illinois University Edwardsville  
Office of the General Counsel  
Rendleman Hall, Room 3311  
Edwardsville, IL 62026-1019

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Pollution Control Board an original and four (4) copies of the AGENCY'S MOTION FOR AND MEMORANDUM OF LAW IN SUPPORT OF RECONSIDERATION of the Illinois Environmental Protection Agency, a copy of which is herewith served upon you.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

By:   
Sanjay K. Sofat, Assistant Counsel  
Division of Legal Counsel

Dated: September 14, 2005  
Illinois Environmental Protection Agency  
1021 North Grand Avenue East  
Springfield, Illinois 62794-9276  
(217) 782-5544

THIS FILING PRINTED ON RECYCLED PAPER

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	)
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PCB 02-105  
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**AGENCY'S MOTION FOR RECONSIDERATION**

NOW COMES the Respondent, Illinois Environmental Protection Agency ("Illinois EPA" or "Agency") by and through its attorney, Sanjay K. Sofat, Assistant Counsel and Special Assistant Attorney General, pursuant to 35 Ill. Adm. Code 101.520, hereby submits this Agency's Motion for Reconsideration to the Illinois Pollution Control Board ("Illinois PCB" or "Board"). The Agency respectfully requests the Board to RECONSIDER its' decision on the issue of interpreting Section 302.211(e) to apply only to rivers. In support of its Motion, the Agency states as follows:

1. On May 6, 2002, the Southern Illinois University at Edwardsville ("SIUE") appealed the terms and conditions of its permit issued by the Agency on January 2, 2002.

2. The Agency included Special Conditions 2 and 3 in SIUE's NPDES permit to comply with the Illinois Environmental Protection Act ("Act") and the Board regulations.
3. Special Conditions 2.A and 2.B in SIUE's permit are identical in language to Sections 302.211(d) and (e) of the Board regulations, respectively.
4. SIUE raised the following issues for the Board's review: i) SIUE's discharge does not have to meet the temperature requirements of 35 Ill. Adm. Code 302.211(d) and (e) because Tower Lake is man-made and has no natural temperature; ii) As several permit requirements apply to rivers as opposed to lakes, they are not applicable to SIUE; iii) SIUE's permit provides no monitoring points in Tower Lake; and iv) The monitoring requirements for the permit are inconsistent. *Board order at 1.*
5. The Agency and SIUE filed their cross motions for summary judgment on April 26, 2005.
6. On August 10, 2004, the Agency received the Board's order dated August 4, 2005, granting SIUE's motion for summary judgment in part and denying it in part.
7. The Board also granted the Agency's cross-motion for summary judgment in part and denied it in part.
8. The Board affirmed the Agency's decision to incorporate Special Conditions 2.A and 3 into SIUE's permit.
9. Regarding Special Condition 2.B, the Board ordered the Agency to remove that permit condition, and any reference to Section 302.211(e) in SIUE's permit.

10. Special Condition 2.B, which is identical in language to Section 302.211(e), has a narrative portion and a table containing monthly maxima temperatures.
11. The Agency argued that Tower Lake is a general use water of the State, and Section 302.211(e) must be read to apply to all waters, not just rivers. The liberal reading of Section 302.211(e) is necessary to ensure adequate protection of aquatic life use in waters of the State other than rivers.
12. Based on the plain reading of Section 302.211(e), the Board concluded that the thermal standards contained in this section applied to representative locations in the main river only.
13. The Agency is not asking the Board to construe “main river” to mean all waters of the State. Rather, the Agency is requesting the Board to apply the monthly maxima temperature limits in the table portion of Section 302.211(e) to all waters of the State.
14. Section 302.211(e) could be read as follows: The narrative portion of Section 302.211(e) discusses the statistical variation that is allowed at the point of measurement in the case of a main river. The monthly maxima water temperatures portion of the regulation would apply to all waters of the State.
15. The Board has the authority to read into the Section 302.211(e) language to ensure that equal protection is provided to aquatic life in both rivers and lakes.
16. The Board further concluded that, as Section 302.211(d) applies to all waters of the State, “[i]nterpreting Section 302.211(e) to apply only to rivers would not leave other waters of the State unregulated with respect to thermal standards.”

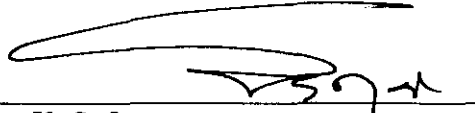
*Board Decision at 13.*

17. The Agency believes that Sections 302.211(d) and (e) provide a necessary two-tier protection to aquatic life in waters of the State. Section 302.211(d) provides the first tier protection by limiting the maximum temperature rise above natural temperature, and Section 302.211(e) provides the second tier protection by limiting the monthly maxima water temperatures.
18. Reading Section 302.211(e) to apply only to rivers creates a gap in the Illinois thermal standard applicable to waters of the State other than rivers.
19. Though the requirements of Section 302.211(d) do apply to all waters of the State including lakes, limiting the applicability of Section 302.211(e) to rivers lessens the protection afforded to aquatic life in lakes.
20. The Agency is requesting the Board to apply the monthly maxima temperature limits portion of Section 302.211(e) to all waters of the State.

WHEREFORE, the Agency respectfully requests that the Board to  
RECONSIDER its' decision on the issue of interpreting Section 302.211(e) to apply only  
to rivers.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL  
PROTECTION AGENCY

By:   
Sanjay K. Sofat  
Assistant Counsel  
Special Assistant Attorney General

DATED: September 14, 2005  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, Illinois 62794-9276  
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**AGENCY'S MEMORANDUM OF LAW IN SUPPORT OF MOTION FOR RECONSIDERATION**

NOW COMES the Respondent, Illinois Environmental Protection Agency ("Illinois EPA" or "Agency") by and through its attorney, Sanjay K. Sofat, Assistant Counsel and Special Assistant Attorney General, pursuant to 35 Ill. Adm. Code 101.520, hereby submits this Agency's Memorandum of Law in Support of Motion for Reconsideration to the Illinois Pollution Control Board ("Illinois PCB" or "Board"). The Agency respectfully requests the Board to RECONSIDER its decision interpreting Section 302.211(e) to apply only to rivers. In support, the Agency states as follows:

**ARGUMENTS**

In construing administrative rules, the same rules that apply to statutory construction apply. *SIUE v. Illinois EPA*, PCB 02-105, at 12 (August 4, 2005). The first

cannon of statutory interpretation is to ascertain and give affect to the legislative intent as expressed in the statute. *City of East Peoria v. Group Five Development Co.*, 87 Ill.2d 42, 46, 57 Ill.Dec. 594, 429 N.E.2d 492 (1981). The legislative intent usually appears from a consideration of the statute's language, which affords the best means of its exposition. *Illinois Power Company v. Mahin*, 72 Ill.2d 189, 194, 21 Ill.Dec. 144, 381 N.E.2d 222 (1979).

A court, however, is not bound by the literal language found in a statute where the language would defeat the legislature's obvious and clearly expressed objective or purpose. *People v. McCoy*, 63 Ill.2d 40, 45, 344 N.E.2d 436 (1976). Words may, thus, be modified, altered, or supplied, to obviate repugnancies or inconsistencies from the legislative intent. *People v. Bratcher*, 63 Ill.2d 534, 543, 349 N.E.2d 31 (1972) (*emphasis added*). The courts usually read into the meaning of a statutory provision a qualifying or expanding expression, which is "plainly implied by the general context of the enactment, which has been palpably omitted and which is essential to prevent the legislative purpose from failing in one of its important aspects." *People v. Gibson*, 99 Ill. App. 3d 615, 616, 55 Ill. Dec. 24, 425 N.E.2d 1197 (2<sup>nd</sup> Dist., 1981) (*emphasis added*). Finally, where two constructions of a law are available, the one which would produce absurd results and render the operation of the law difficult should be avoided. *Balmes v. HIAB-FOCO, A.B.*, 105 Ill.App.3d 572, 575, 61 Ill.Dec. 329, 434 N.E.2d 482 (1982).

The Agency urges the Board to follow the courts' reasoning in *Bratcher*, *Gibson*, and *Balmes* because the limited reading of Section 302.211(e) would create inconsistency by providing lesser protection to the aquatic life use in waters of the State other than rivers. The Illinois Sanitary Water Board originally adopted the Section 302.211(e)



language; later the Board incorporated the then-existing language into its regulations without any discussion. See *SWB-14* (1968), *SWB-10* (1968), *R 70-2* (June 9, 1971). As the clear intent of the original drafters is not documented anywhere, at the best, one could only speculate regarding the original intent. Unlike the adopting opinions for Sections 302.205 and 302.211(j), the adopting opinion for Section 302.211(e) does not specifically state that Section 302.211(e) was intended only to apply to rivers. *R71-14* (Dec. 21, 1971). By reading Section 302.211(e) to only apply to rivers, the aquatic life in waters of the State other than rivers would not get protection from the monthly maxima temperature limits. Where intent is not clear, the Board has the authority to modify, alter, or supply words to prevent inconsistencies from the original intent. Also, the Board has the authority to read into the meaning of a regulation a qualifying or expanding expression to prevent the legislative purpose from failing in one of its important aspects.

The Agency reads Section 302.211(e) to have two distinct and independent components. The first component narrates the maximum statistical variation allowed at representative locations in the main river. The second component provides a table containing monthly maxima temperatures. The Agency is urging the Board to read this second component to apply to all waters of the State.

In its August 4, 2005 order, the Board concluded that Section 302.211(e) only applied to rivers. The Board further concluded that by interpreting Section 302.211(e) to only apply to rivers, it would not leave other waters of the State unregulated with respect to thermal standard. The Board's conclusion on the Section 302.211(e) applicability is based on the interpretation of the phrase "main river" in the regulation. The Agency admits that the Section 302.211(e) language is poorly drafted. However, The Agency is

not asking the Board to interpret “main river” to mean all waters of the State, rather the Agency is requesting the Board to apply the monthly maxima water temperature limits of Section 302.211(e) to all waters of the State to fill the gap created by the poorly drafted language. A literal reading of Section 302.211(e) should be avoided as it would create a gap in the temperature protection given to aquatic life in waters of the State other than rivers. This liberal reading of Section 302.211(e) is both legally and technically justified. The following reasons support the Agency’s position that the monthly maxima temperature limits apply to all waters of the State, including lakes and rivers.

A literal reading of Section 302.211(e) should be further avoided to meet the Clean Water Act goals. These goals require the States to specify appropriate uses to be achieved and protected by taking into consideration the use and value of the water body for public water supply, for propagation of fish, shellfish, and wildlife, and for recreational, agricultural, industrial, and navigational purposes. 33 U.S.C. §1251.

A water quality standard defines the water quality goals of a water body by designating the use or uses to be made of the water. In Illinois, the Board regulations provide that the General Use standards are designed to protect, among other uses, the State’s water for aquatic life use. *35 Ill. Adm. Code 302.202*. Further, Section 302.201 provides that Subpart B contains general use water quality standards which must be met in waters of the State for which there is no specific designation. *35 Ill. Adm. Code 302.201*. As Tower Lake is a general use water body, all designated uses including the aquatic life use, must be protected to ensure compliance with the Clean Water Act goals. Just as in rivers, the aquatic life use in waters of the State other than rivers must be protected from high temperatures.

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The Agency does not dispute the Board's authority to promulgate rules that are specific to a particular waterbody. Nor does the Agency dispute the Board's findings that Section 302.211(d) applies to all waters of the State. The real issue though is whether waters of the State other than rivers need protection afforded by the monthly maxima temperature limits of Section 302.211(e). As Tower Lake is a general use water, the aquatic life use is a designated use that needs to be protected just as this use needs to be protected in rivers. Based on the Board's applicability of Section 302.211(e), the aquatic life use in rivers gets two-tiered protection, whereas the same designated use in waters of the State other than rivers gets only one tier protection. This gap in protection is because of the poor drafting of the regulation, and not because of the original drafters' intent to lessen the protection provided to aquatic life in waters of the State other than rivers.

The Agency believes that the two-tiered protection provided by Sections 302.211(d) and (e) together/jointly is essential for propagation of fish in waters of the State other than rivers. The maximum temperature variation from background levels under Section 302.211(d) provides protection from extreme changes in temperature to protect fish from dying from temperature shock. Whereas, the monthly maxima temperature protection afforded by Section 302.211(e) protects aquatic organisms from high temperatures that will ultimately kill the organism. There are several methods to determine this monthly maxima temperature limit. For example, Critical Thermal Maximum ("CTM") is the temperature at which disorientation and cessation of directed activities can be caused by high temperatures. At this temperature, the animal loses its ability to escape from conditions that will soon cause its death. Even if temperature itself is not responsible for an animal's death, a CTM condition can cause or lead to death from

predation by a more active temperature resistant predator (Cooper, 1966<sup>1</sup>). Other methods to determine an upper thermal endpoint include, chronic thermal maximum (“ChTM”), upper incipient lethal temperature (“UILT”), and ultimate upper incipient lethal temperature (“UUILT”). These methods vary by the rate at which the animal is subjected to water temperature changes. The CMT method employs rapid change in the temperature (>0.5-1.0 °C/hr), where as the ChTM method slowly changes the water temperature (<1.0-1.5 °C/day). The end points determined by these methods vary based on the acclimation temperature of the test organism resulting in a range of endpoints for each organism. The following table shows the CTM range for several fish native to Illinois (Beitinger et al. 2000<sup>2</sup>).

Common Name ( <i>Scientific Name</i> )	CTM range
Largemouth Bass ( <i>Micropterus salmoides</i> )	33.4 °C (92.1 °F) – 40.1 °C (104.2°F)
Emerald Shiner ( <i>Notropis atherinoides</i> )	34.1 °C (93.4 °F) – 37.6 °C (99.7 °F)
Blacknose Dace ( <i>Rhinichthys atratulus</i> )	31.9 °C (89.4 °F)
Channel Catfish ( <i>Ictalurus punctatus</i> )	33.3 °C (91.9 °F) – 42.1 °C (107.8 °F)
Johnny Darter ( <i>Etheostoma nigrum</i> )	30.1 °C (86.2 °F) – 37.4 °C (99.3 °F)

The table above is not provided to determine the maximum temperature limit for a particular species, but to illustrate that aquatic organisms need to be protected from exposure to maximum temperatures irrespective of whether they live in lakes, streams, river, or wetlands. By providing the second-tier protection, the monthly maxima limit ensures that the aquatic life is protected in situations where the natural background

<sup>1</sup> Cooper, Edwin L. A Symposium on Water Quality Criteria to Protect Aquatic Life, American Fisheries Society, Special Publication No. 4, September 1966.

<sup>2</sup> Beitinger, T.L., W.A. Bennett, and R. W. McCauley. 2000. Temperature tolerances of North American freshwater fishes exposed to dynamic changes in temperature. *Environmental Biology of Fishes* 58: 237-275.

temperature is high. For example, if the natural background temperature of the receiving water is 90° F, and a facility causes that temperature to increase by 5° F, though consistent with Section 302.211(d), it could be above the CMT limit, and thus lethal to the organism.

Finally, the Agency's reading of Sections 302.211(d) and (e) as providing two-tier temperature protection is consistent with the protection provided to aquatic life in other states. Wisconsin's temperature standards for fish and aquatic life use provide two levels of protection. One is similar to the Section 302.211(d) requirement, which states that, "[t]he maximum temperature rise at the edge of the mixing zone above the existing natural temperature shall not exceed 5° F for streams and 3° F for lakes." The second tier protection is provided by the provision, which states that, "[t]he temperature shall not exceed 89° F for warm water fish." *See Attachment A.* Indiana's temperature requirements for protection of aquatic life are similar to those of Illinois. 327 IAC 2-1-6(b)(4)(C) and (4)(D) of the Indiana Code apply to lakes and reservoirs and contain a requirement regarding maximum temperature rise above natural temperatures, and a monthly maxima temperature requirement, respectively. *See Attachment B.*

In sum, the Agency respectfully requests the Board to read the monthly maxima temperature limits of Section 302.211(e) to apply to all waters of the State. The poorly drafted Section 302.211(e) creates a gap in the Illinois thermal standard, and thus a literal reading of the language should be avoided. Also, as there is no evidence that the original drafters intended Section 302.211(e) to only apply to rivers, the Board has authority to read into the plain language of Section 302.211(e) to accomplish the Clean Water Act

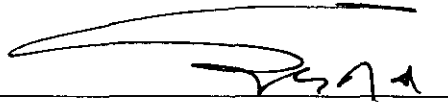
goals. Further, two-tier protection is essential to ensure protection of the aquatic life use in waters of the State other than rivers.

**CONCLUSION**

For the reasons and arguments provided herein, the Agency respectfully requests the Board to RECONSIDER the issue regarding the applicability of Section 302.211(e) of the Board regulation.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL  
PROTECTION AGENCY

By:   
Sanjay K. Sofat  
Special Assistant Attorney General  
Division of Legal Counsel

Dated: September 14, 2005  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, Illinois 62794-9276  
(217) 782-5544

STATE OF ILLINOIS )  
 )  
COUNTY OF SANGAMON )

SS

**PROOF OF SERVICE**

I, the undersigned, on oath state that I have served the attached the **AGENCY'S MOTION FOR AND MEMORANDUM OF LAW IN SUPPORT OF RECONSIDERATION** upon the persons to whom it is directed, by placing a copy in an envelope addressed to:

Dorothy Gunn, Clerk  
Pollution Control Board  
100 West Randolph Street  
Suite 11-500  
Chicago, IL 60601

Joel A. Benoit  
MOHAN, ALEWELT, PRILLAMAN & ADAMI  
First of America Center  
1 N. Old Capitol Plaza, Ste. 325  
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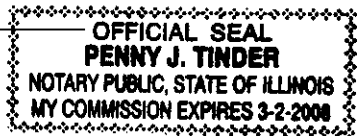
Kim L. Kim  
Southern Illinois University Edwardsville  
Office of the General Counsel  
Rendleman Hall, Room 3311  
Edwardsville, IL 62026-1019

and mailing it from Springfield, Illinois on September 14, 2005, by U.S. Mail with sufficient postage affixed.

*Nancy J. D. Lampert*

SUBSCRIBED AND SWORN BEFORE ME  
THIS 14<sup>th</sup> DAY OF SEPTEMBER, 2005.

*Penny J. Tinder*



THIS FILING PRINTED ON RECYCLED PAPER



# Attachment A

## Unofficial Text (See Printed Volume). Current through date and Register shown on Title Page.

fish species. This subcategory includes, but is not restricted to, surface waters identified as trout water by the department of natural resources (Wisconsin Trout Streams, publication 6-3600 (80)).

(b) *Warm water sport fish communities.* This subcategory includes surface waters capable of supporting a community of warm water sport fish or serving as a spawning area for warm water sport fish.

(c) *Warm water forage fish communities.* This subcategory includes surface waters capable of supporting an abundant diverse community of forage fish and other aquatic life.

(d) *Limited forage fish communities.* (Intermediate surface waters). This subcategory includes surface waters of limited capacity and naturally poor water quality or habitat. These surface waters are capable of supporting only a limited community of forage fish and other aquatic life.

(e) *Limited aquatic life.* (Marginal surface waters). This subcategory includes surface waters of severely limited capacity and naturally poor water quality or habitat. These surface waters are capable of supporting only a limited community of aquatic life.

(4) **STANDARDS FOR FISH AND AQUATIC LIFE.** Except for natural conditions, all waters classified for fish and aquatic life shall meet the following criteria:

(a) *Dissolved oxygen.* Except as provided in par. (e) and s. NR 104.02 (3), the dissolved oxygen content in surface waters may not be lowered to less than 5 mg/L at any time.

(b) *Temperature.* 1. There shall be no temperature changes that may adversely affect aquatic life.

2. Natural daily and seasonal temperature fluctuations shall be maintained.

3. The maximum temperature rise at the edge of the mixing zone above the existing natural temperature shall not exceed 5° F for streams and 3° F for lakes.

4. The temperature shall not exceed 89° F for warm water fish.

(c) *pH.* The pH shall be within the range of 6.0 to 9.0, with no change greater than 0.5 units outside the estimated natural seasonal maximum and minimum.

(d) *Other substances.* Unauthorized concentrations of substances are not permitted that alone or in combination with other materials present are toxic to fish or other aquatic life. Surface waters shall meet the acute and chronic criteria as set forth in or developed pursuant to ss. NR 105.05 and 105.06. Surface waters shall meet the criteria which correspond to the appropriate fish and aquatic life subcategory for the surface water, except as provided in s. NR 104.02 (3).

(e) *Temperature and dissolved oxygen for cold waters.* Streams classified as trout waters by the department of natural resources (Wisconsin Trout Streams, publication 6-3600 (80)) or as great lakes or cold water communities may not be altered from natural background temperature and dissolved oxygen levels to such an extent that trout populations are adversely affected.

1. There shall be no significant artificial increases in temperature where natural trout reproduction is to be protected.

2. Dissolved oxygen in classified trout streams shall not be artificially lowered to less than 6.0 mg/L at any time, nor shall the dissolved oxygen be lowered to less 7.0 mg/L during the spawning season.

3. The dissolved oxygen in great lakes tributaries used by stocked salmonids for spawning runs shall not be lowered below natural background during the period of habitation.

(5) **STANDARDS FOR RECREATIONAL USE.** A sanitary survey and/or evaluation to assure protection from fecal contamination is the chief criterion in determining the suitability of a surface water for recreational use.

(a) *Bacteriological guidelines.* The membrane filter fecal coliform count may not exceed 200 per 100 ml as a geometric mean

based on not less than 5 samples per month, nor exceed 400 per 100 ml in more than 10% of all samples during any month.

(b) *Exceptions.* Whenever the department determines, in accordance with the procedures specified in s. NR 210.06, that wastewater disinfection is not required to protect recreational uses, the recreational use criteria and classifications as established in this subsection and in chs. NR 103 and 104 do not apply.

(6) **STANDARDS FOR PUBLIC HEALTH AND WELFARE.** All surface waters shall meet the human threshold and human cancer criteria specified in or developed pursuant to ss. NR 105.08 and 105.09, respectively. The applicable criteria vary depending on whether the surface water is used for public drinking water supplies and vary with the type of fish and other aquatic life subcategory. All surface waters providing public drinking water supplies or classified as cold water or warm water sport fish communities as described in sub. (3) shall meet the taste and odor criteria specified in or developed pursuant to s. NR 102.14.

(7) **STANDARDS FOR WILDLIFE.** All surface waters shall be classified for wildlife uses and meet the wildlife criteria specified in or developed pursuant to s. NR 105.07.

*History:* Cr. Register, September, 1973, No. 213, eff. 10-1-73; am. (3), Register, December, 1977, No. 264, eff. 1-1-78; renum. from NR 102.02, r. (3) (d) 1. to 3., and (5), renum. (3) (intro.) to (d) (intro.) and (e) and (4) to be (4) (intro.) to (e) and (5) and am. (4) (a), (d), (e) (intro.) and (5), cr. (6) and (7), Register, February, 1989, No. 398, eff. 3-1-89; am. (3) (intro.), (6), (7), r. (3) (a), renum. (3) (b) to (f) to be (3) (a) to (e) and am. (3) (a), Register, August, 1997, No. 500, eff. 9-1-97.

**NR 102.05 Application of standards.** (1) **ANTIDEGRADATION.** (a) No waters of the state shall be lowered in quality unless it has been affirmatively demonstrated to the department that such a change is justified as a result of necessary economic and social development, provided that no new or increased effluent interferes with or becomes injurious to any assigned uses made of or presently possible in such waters.

(b) *Classification system.* For the purposes of this subsection, all surface waters of the state, or portions thereof, shall be classified as one of the following:

1. Outstanding resource waters as listed in s. NR 102.10,
2. Exceptional resource waters as listed in s. NR 102.11,
3. Great Lakes system waters as listed in s. NR 102.12 (1),
4. Fish and aquatic life waters as described in s. NR 102.13,

or

5. Waters listed in tables 3 through 8 in ss. NR 104.05 to 104.10.

(2) **STREAMFLOW.** Water quality standards will not be maintained under all natural occurrences of flow, temperature, or other water quality characteristics. The determination of water quality based effluent limitations or other management practices shall be based upon the following conditions except as provided in ch. NR 106 for toxic and organoleptic substances and whole effluent toxicity:

(a) The average minimum 7-day low streamflow which occurs once in 10 years (7-day Q<sub>10</sub>); or,

(b) In the case of dissolved oxygen and wherever sufficient data on streamflow and temperature are available, by application of a 0.274% level of nonattainment. This is equivalent to an expected nonattainment of the dissolved oxygen criterion of one day per year.

(3) **MIXING ZONES.** Water quality standards shall be met at every point outside of a mixing zone. The size of the mixing zone cannot be uniformly prescribed, but shall be based on such factors as effluent quality and quantity, available dilution, temperature, current, type of outfall, channel configuration and restrictions to fish movement. For toxic and organoleptic substances with water quality criteria or secondary values specified in or developed pursuant to chs. NR 102 and 105, allowable dilution shall be determined as specified in ch. NR 106 in addition to the requirements specified in this subsection. As a guide to the delineation of a mixing zone, the following shall be taken into consideration:

# Attachment B

# INDIANA CODE

50	2	0.7	984	117	9	6	34	1	789	88	0.6	-	65	59
100	4	1.1	1737	207	18	12	82	3	1418	158	2.	-	117	106
150	6	1.6	2420	289	26	17	137	5	1999	222	4	-	165	149
200	9	2.0	3064	365	34	21	197	8	2549	283	7	-	210	191
250	11	2.3	3679	438	42	26	262	10	3079	342	10	-	254	230
300	14	2.7	4270	509	50	30	331	13	3592	400	13	-	297	269
350	16	3.0	4845	577	58	34	402	16	4093	455	18	-	338	306
400	19	3.4	5405	644	65	39	477	19	4582	509	22	-	379	343
450	21	3.7	5952	709	73	43	554	22	5063	563	27	-	419	379
500	24	4.0	6488	773	81	47	634	25	5535	615	32	-	458	415

(b) This subsection establishes minimum water quality for aquatic life. In addition to subsection (a), subdivisions (1) through (5) are established to ensure conditions necessary for the maintenance of a well-balanced aquatic community. Subdivisions (1) through (5) are applicable at any point in the waters outside of the mixing zone:

(1) There shall be no substances which impart unpalatable flavor to food fish or result in noticeably offensive odors in the vicinity of the water.

(2) No pH values below six (6.0) nor above nine (9.0), except daily fluctuations which exceed pH nine (9.0) and are correlated with photosynthetic activity, shall be permitted.

(3) Concentrations of dissolved oxygen shall average at least five (5.0) milligrams per liter per calendar day and shall not be less than four (4.0) milligrams per liter at any time.

(4) The following conditions for temperature:

(A) There shall be no abnormal temperature changes that may adversely affect aquatic life unless caused by natural conditions.

(B) The normal daily and seasonal temperature fluctuations that existed before the addition of heat due to other than natural causes shall be maintained.

(C) The maximum temperature rise at any time or place above natural temperatures shall not exceed five degrees Fahrenheit (5°F) (two and eight-tenths degrees Celsius (2.8°C)) in streams and three degrees Fahrenheit (3°F) (one and seven-tenths degrees Celsius (1.7°C)) in lakes and reservoirs.

(D) Water temperatures shall not exceed the maximum limits in the following table during more than one percent (1%) of the hours in the twelve (12) month period ending with any month; at no time shall the water temperature at such locations exceed the maximum limits in Table 3 by more than three degrees Fahrenheit (3°F) (one and seven-tenths degrees Celsius (1.7°C)).

TABLE 3

	Other	
	Ohio River Main Stem	Indiana Streams
	°F(°C)	°F(°C)
January	50 (10.0)	50 (10.0)
February	50 (10.0)	50 (10.0)
March	60 (15.6)	60 (15.6)
April	70 (21.1)	70 (21.1)
May	80 (26.7)	80 (26.7)
June	87 (30.6)	90 (32.2)
July	89 (31.7)	90 (32.2)
August	89 (31.7)	90 (32.2)
September	87 (30.7)	90 (32.2)
October	78 (25.6)	78 (25.5)