

ILLINOIS POLLUTION CONTROL BOARD
June 13, 1985

IN RE: SITE-SPECIFIC)
RULEMAKING FOR THE)
CITY OF EAST PEORIA)

R84-30

PROPOSED RULE FIRST NOTICE

OPINION AND ORDER OF THE BOARD (by B. Forcade):

On July 16, 1985, the City of East Peoria ("East Peoria") filed a petition for site-specific rulemaking with the Board. East Peoria's Sewage Treatment Plant No. 1 ("the facility") presently discharges its effluent to the Illinois River. As part of a facility improvement program, East Peoria would like to change the location of their discharge point to a small waterway adjacent to the Illinois River, known as Ditch A. Ditch A joins another small waterway, known as the Main Ditch. Existing stormwater runoff in these waterways is pumped over a levee to the Illinois River. Effluent limitations applicable to discharges to Ditch A are more restrictive than to discharges to the Illinois River. Therefore, East Peoria would have to substantially improve the present quality of their effluent to discharge to the new location in compliance with Board regulations. Because East Peoria believes that discharging the present quality effluent to Ditch A would improve environmental quality in the area, they are seeking a regulatory change to allow such action.

Hearing was held in this matter on September 10, 1984. The Illinois Department of Energy and Natural Resources filed a "Negative Declaration" of economic impact in this matter on November 29, 1984. The Economic Technical Advisory Committee concurred in that determination on January 23, 1985. On April 9, 1985, the Illinois Environmental Protection Agency ("Agency") recommended that the Board deny East Peoria's request due to inadequate factual justification. On May 2, 1985, East Peoria filed a reply to the Agency recommendation.

All pending motions to file out of time are granted. While the Board was not able to immediately grant East Peoria's May 2, 1985, Motion for Expedited Ruling, it has attempted to be responsive to those concerns.

East Peoria is located in Tazewell County, adjacent to the Illinois River. The facility is located adjacent to Ditch A, which is parallel to and approximately 1600 feet southeast of the Illinois River. Presently, East Peoria discharges by underground pipe to the Illinois River. East Peoria is in the process of upgrading the facility. After the upgrading is completed, the

design average flow will be 4.22 million gallons per day (MGD), with peak design flow of 8.44 MGD, consisting primarily of treated sanitary sewage from East Peoria.

East Peoria currently pumps their effluent to the Illinois River using one pump rated at 4500 gallons per minute with an appropriate head pressure. Because the system head conditions are low, the pump must be throttled to operate properly. With the new facility improvements, this pump will be replaced.

Throughout this proceeding, it has been clear that East Peoria is capable and willing to make the planned facility improvements while continuing to discharge to the Illinois River. No issue of technological infeasibility or economic hardship is presented. However, East Peoria believes it is desirable, environmentally and economically, to allow the facility to discharge the present quality of effluent to Ditch A. East Peoria seeks relief from the effluent limitation of 35 Ill. Adm. Code 304.120(c), which sets maximum contaminant levels at 10 mg/l of BOD and 12 mg/l of suspended solids to waterways such as Ditch A, where the dilution ratio is less than five to one.

East Peoria seeks to have its discharges to Ditch A regulated at 20 mg/l BOD and 25 mg/l of suspended solids, the same limitations that presently apply under Section 304.120(b) to the facility's discharges to the Illinois River. While East Peoria would be able to discharge to Ditch A without regulatory relief, if the facility were upgraded to meet the more stringent effluent requirements of 10/12, the cost of facility upgrading is quite high and East Peoria does not wish to pursue this option.

East Peoria has provided economic evaluations for the two preferred alternatives. Alternative No. 1 involves facility upgrading with continued discharge to the Illinois River. This option would require no relief from Board regulations. Alternative No. 2 involves facility upgrading and discharge to Ditch A at effluent limitations of 20/25. This option would require Board regulatory action. After elimination of the common costs to both proposals, and stating the remaining costs in terms of present worth cost and equivalent uniform annual cost the differences are most clearly seen.

Alternative No. 1 has a present worth cost of \$357,624 with an equivalent annual cost of \$36,764. Alternative No. 2 has a present worth cost of \$213,106 with an equivalent uniform annual cost of \$21,907. Thus, if East Peoria is granted the regulatory relief it seeks, total savings amount to \$144,518, or about \$15,850 per year (Pet., pp. 4-5). East Peoria has recently adjusted the sewer use rate for its customers, to reflect the \$8.1 million treatment plant and sewer upgrading, to \$1.75 per thousand gallons. That rate will not be affected by whichever discharge option is selected. However, gross savings to the system of over \$15,000 per year are anticipated if discharge to

Ditch A is approved (R. 36-38). In view of the minimal cost differential of the two options, both well within East Peoria's financial capability, and the fact that both are clearly technically feasible, the Board must focus on the environmental impacts on the smaller waterway of the two alternatives.

The T-shaped waterway into which East Peoria seeks to discharge consists of Ditch A (which is several thousand feet long, approximately forty feet wide, and approximately 2-3 feet deep) parallel to the Illinois River and the Main Ditch (which is 1,250 feet from the confluence with Ditch A to its termination adjacent to the Illinois River, approximately forty feet wide and 2-3 feet deep). Both are part of a man-made network of drainage ditches to collect surface water runoff from approximately 1,050 acres and convey it to a pumping station which pumps the stormwater into the Illinois River.

The land adjacent to Ditch A and Main Ditch in the area of concern is owned by the Caterpillar Tractor Company and is zoned for manufacturing. Much of the land is a low marshy-type area with large areas of ponded water. There are currently no existing or proposed developments for the area. There is one residence in the area, maintained by the Levee District for the Levee Pump operator. If the discharge point is changed, this residence would be abolished and other arrangements for pump maintenance would be made (Pet., p. 2; Ex. 2).

East Peoria urges that switching the discharge to Ditch A will have several beneficial environmental impacts:

1. It will reduce the potential for freezing in winter and reduce the amount of aquatic die-off.
2. Plant effluent will reduce the high suspended solids concentrations in the ditch.
3. Plant effluent will increase the dissolved oxygen concentration in the ditch.
4. Plant effluent will increase the flows in the ditch which will improve scouring, reduce stagnation and reduce algal growth.

To support these contentions, East Peoria has provided certain chemical analyses of plant effluent, Ditch A and Main Ditch ambient water quality and a biological evaluation of the ditches.

The Board notes that while information on existing effluent quality is helpful to the Board, it is of limited utility in this proceeding. East Peoria does intend to substantially expand and improve its sewage collection and treatment facility. Consequently, it has not represented to the Board that the character of the future effluent to Ditch A would be identical to existing effluent to the Illinois River.

Chemical analyses of Ditch A and Main Ditch (Ex. 2, p. 4-5) for several samplings in August of 1984, show average concentrations for dissolved oxygen of below 5.0 mg/l, for ammonia nitrogen of 0.95 mg/l, for pH of 7.0, for BOD of 17.9 mg/l, and for suspended solids of 30.9 mg/l. The biological evaluation observed carp, sunfish, turtles and muskrat, as well as floating algal masses. The biologist concluded that the ditch is too shallow to support aquatic fauna other than those adapted to low oxygen, that stagnant or near stagnant conditions are common throughout the summer, and the ditch is likely to freeze from top to bottom in most areas during the winter discouraging establishment of fish populations requiring high levels of dissolved oxygen. The biologist did not list any adverse effects on aquatic organisms expected from effluent discharges (Ex. 2, App. B).

The Agency filed comments recommending that the Board deny the request for site-specific rule citing inadequate information to establish lack of environmental harm and establish that water quality standards will not be violated. The Board agrees with the Agency that the record on water quality and environmental conditions in the proposed discharge area is exceedingly thin. Not only are few data presented, but their collection over a short period and at the height of the summer season raises serious question regarding their representativeness. Only in the truly exceptional case could the Board give weight to data which do not more fully characterize long-term ambient conditions in the receiving waterway.

Despite the paucity of the record, the Board must focus on what facts do exist here, in light of what relief is being requested. First, the Board notes that East Peoria is not requesting relief from any water quality standards applicable to the requested discharge area. The record before the Board would not support such relief. East Peoria appears to be willing to presume it will not violate water quality standards and to bear the consequences should that presumption prove wrong.

Likewise, East Peoria has failed to demonstrate that there will be no adverse environmental impact from granting the requested relief. However, East Peoria has demonstrated that some aspects of the change will be environmentally beneficial, namely the reduced stagnation and reduced likelihood of complete freezing in winter.

The record shows present water quality violations in the requested receiving waters, those waters are unique in that they are composed exclusively of stormwater runoff and groundwater seepage having no physical connection to the Illinois River. The waterway freezes in winter and stagnates in summer, and East Peoria has demonstrated that some of the adverse conditions will be minimized or eliminated by discharging effluent to the waterway.

This proceeding presents the Board with an unusual physical setting and set of circumstances. The Petitioner has requested limited relief from effluent standards. The receiving waters are better characterized as a long, narrow man-made pond or lagoon than a stream. They have no connection to the Illinois River by which fish and other aquatic organisms may float or swim in either direction, without going through the pumps. Inflow is from stormwater runoff from less than two square miles of largely commercial land and groundwater seepage. The waters even lack the often overlooked ecological value of intermittent streams. The ditch has no known existing or potential recreational value and its utility to fish and wildlife is extremely limited at best.

As stated above, the environmental information and water quality data supplied by the City is sketchy and would be considered insufficient to support the granting of relief in most situations involving such requests. However, given the facts in the instant proceeding, the Board does not believe that any significant benefit to the environment or public interest would be served by denying the requested relief. In granting this relief, the Board recognizes that water quality standards will continue to be applicable to Ditch A.

ORDER

The Board hereby adopts the following rule for First Notice and instructs the Clerk of the Board to file this rule with the Secretary of State:

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE C: WATER POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD

PART 304
SITE-SPECIFIC RULES AND EXCEPTIONS
NOT OF GENERAL APPLICABILITY

Section 304.211 City of East Peoria Discharges

- a) This Section applies only to effluent discharges from the City of East Peoria's Sewage Treatment Plant No. 1 into Ditch A in Tazewell County, Illinois.
- b) The provisions of Section 304.120(c) shall not apply to said discharges, provided that said discharges shall not exceed 20 mg/l of five day biochemical oxygen demand (BOD₅) (STORET number 00310) or 25 mg/l of total suspended solids (STORET number 00530)

IT IS SO ORDERED

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Proposed Rule/First Notice Opinion and Order was adopted on the 134 day of June, 1985, by a vote of 7-0.

Dorothy M. Gunn
Dorothy M. Gunn, Clerk
Illinois Pollution Control Board