

ILLINOIS POLLUTION CONTROL BOARD  
February 5, 1987

CITY OF OGLESBY, )  
 )  
 Petitioner, )  
 )  
 vs. ) PCB 86-3  
 )  
 ILLINOIS ENVIRONMENTAL )  
 PROTECTION AGENCY, )  
 )  
 Respondent. )

OPINION AND ORDER OF THE BOARD (by J. Anderson):

This matter comes before the Board on a January 2, 1986 petition filed by the City of Oglesby (City) for exception to Ill. Adm. Code 306.305(a) and (b) of the Board's combined sewer overflow (CSO) regulations. This action has been conducted pursuant to the CSO exception procedure (Sections 306.350-306.374 generally).

The City filed a single petition, as the Environmental Protection Agency (Agency) declined (both before and after hearing) to become a joint petitioner. Hearing was held on June 20, 1986. One member of the public was present and did not testify. In response to requests at hearing as well as an August 13, 1986 Hearing Officer's Order, the City filed additional information on August 4, 1986, August 11, 1986, and August 21, 1986; the Agency filed comments on August 27, 1986, which included an August 15, 1986 report from the City which responds to an August 1, 1986 request concerning the City's Municipal Compliance Plan (MCP). The Agency also filed a request for Board Action on January 5, 1987.

General Description:

At the outset, the Board notes that certain elements of the petition and supporting information were developed, amended, or updated during the course of this proceeding, including post-hearing transmittals. The Board will not summarize these amendments, except as they may relate to the Board's determination. The Board also notes that this record reflects the City's interaction with the Agency in developing its Municipal Compliance Plant (MCP), a federally required process to assure that all of the City's facilities are in full compliance with the Clean Water Act by the July 1, 1988 deadline.

The City, with a 1980 population of 3,979, is bisected by Ill. Rte. 71 and is located about one mile south of the Illinois River. The Vermilion River flows from southeast to northwest along the northeast boundary of the developed portion of the City (Ex. H). The City's CSO's flow to the Vermilion River.

35 Ill. Adm. Code 306.305(a) and (b) read as follows:

Section 306.305 Treatment of Overflows and Bypasses

All combined sewer overflows and treatment plant bypass shall be given sufficient treatment to prevent pollution, or the violation of applicable water standards unless an exception has been granted by the Board pursuant to Subpart D.

Sufficient treatment shall consist of the following:

- a) All dry weather flows, and the first flush of storm flows as determined by the Agency, shall meet the applicable effluent standards; and
- b) Additional flows, as determined by the Agency but not less than ten times to average dry weather flow for the design year, shall receive a minimum of primary treatment and disinfection with adequate retention time.

The City asserted that it is unable either to fully treat the total first flush volume or to provide primary treatment and chlorination to ten times dry weather flow. The City has approximately 15 miles of combined sewers and five miles of separate sewers (Ex. I, R. 23).

The City also stated that its sewage treatment plant (STP) is unable to consistently meet effluent limitations in its NPDES permit for BOD and total suspended solids (R. 22, 23).

Over the years, particularly in the mid 1950's and 1960's, storm sewers were constructed to alleviate the most serious localized basement backup and flooding conditions. Recently, a storm sewer was constructed to serve an industrial area. However, the major portion of the City is still served by a combined sewer system with high rates of inflow (Ex. B, p. 11, 12). In some areas, even though storm sewers exist, there is still infiltration/inflow because of poor joints, as well as unlocated foundation drains and downspouts. (R. 25) The City has adopted a downspout ordinance to eliminate flow to the combined sewers. During rainfall periods, the City blocks some of the inlets. The City also conducts twice weekly street sweeping and semiannual sewer cleaning, on an as needed basis. (R. 18-20, 72)

The major interceptor traverses across an area tributary to a series of ravines. All flows, both surface and sewer, traverse these ravines and discharge into the Vermilion River, which has a 7 day/10 year low flow of about 8 CFS. (Ex. H, 3, R. 25) There are four overflow points in the combined sewer system: 0-1, 0-2, 0-3 and 0-4. CSO-0-4 is an STP bypass located at the STP outfall. (Ex. I) The overflows travel about 300-400' through the ravine beds, dropping about 50-60' before reaching the River. Based on measurements at CSO-0-4 only, the City estimated that overflows occur about 10-12 times a year at all four CSO's and are triggered by about a 1/4 inch/hour of rainfall. (R. 45-47).

The STP is a trickling filter secondary treatment facility built in 1956. Its average and peak flows are 0.492 and 0.993 respectively. Sustained wet weather flow over a 31 day period in March, 1982, was 0.691 mgd. Industry contribution is insignificant. (R. 28,29, Ex. H). The STP is relatively landlocked, since it sits in a bowl, with much higher land surrounding the site (Pet., p. 6, Ex. A, p. 1)

The overflow points are contained in manholes; overflows occur when the trunk sewer is about one-half full. (R. 34) Regarding CSO-0-4, a bypass occurs when the flow reaches about 0.9 mgd at the head end of the plant.

#### Proposed Improvements

Under the proposed upgrading, it appears that under wet weather conditions the STP might be able to accept 1.452 mgd as limited by the primary settling tanks, although later submittals indicate that full secondary treatment appears to be limited by the 1.224 mgd short-term capacity of the final settling tank. (R. 61-71, City letter, 8/4/86, Attach. II, City letter 8/15/86 attached to Agency Comment E-6)

The City made the following determination of the percentage volume of first flush to be captured and treated (City letter 8/4/86, Attach. III)

FIRST FLUSH CAPTURED AND TREATED

SYSTEM:

| TOTAL AVERAGE WF (CFS) | CAPACITY EXISTING LIMITING HYDR. CAP. TO NEXT DOWNSTREAM OVERFLOW (CFS) | REMAINING UNTIL 1/2 FULL (i.e. OVERFLOW BEGINS) -TO CARRY 1ST FLUSH (CFS) | DIRECTED TO PLANT FR STORM OF 1 HOUR (MG) | CUMULATIVE 1 YR., 1 HR. 1ST FLUSH FLOW VOLUME (MG) | CAPTURED AND TREATED (%) |
|------------------------|---|---|---|--|--------------------------|
| 0.149                  | 0.83  | $\frac{0.83-0.149}{2}=0.34$   | 0.009                                     | 0.27   | 3.4                      |
| 0.337                  | 2.5   | $\frac{2.5-0.337}{2}=1.08$  | 0.029                                     | 0.76   | 3.8                      |
| 0.365                  | 4.1   | $\frac{4.1-0.365}{2}=1.87$  | 0.050                                     | 0.84   | 6.0                      |
| 1.513                  | NA  | NA  | NA  | NA   | NA                       |

WATER TREATMENT PLANT:

| AVERAGE PEAK PLANT CAPACITY (MGD) | CAPACITY REMAINING TO PROVIDE FULL TREATMENT OF FIRST FLOW (MGD) | TREATED AT PLANT FROM STORE OF 1 HOUR (MG) | CUMULATIVE 1 YR., 1 HR. 1ST FLUSH FLOW VOLUME (MG) | CAPTURED AND TREATED (%) |
|-----------------------------------|--|--|--|--------------------------|
| 2.2134                            | $2.2134-0.879 = 1.3344$  | 0.056                                      | 2.84   |                          |

The Board notes that the post-hearing data, correcting or adding to what was presented at hearing, still leaves questions as to the hydraulics of the system overall. In any event, the Agency appears to be satisfied with the post-hearing data regarding wet/dry weather capacities at the treatment plant. (Agency Comments, 8/27/86, p. 2).

Regarding overflow improvements, to minimize impact on the stream the City proposes to install: bar grates at four manhole locations for 0-2 and 0-4, a bar grate at a single manhole location for 0-3, and stop plank grooves and stop planks to raise

the elevation of the overflow at the manhole for 0-1 (Ex. H.-5,6). The bar grates will screen-out sewage related matter and debris which, after the flow has receded, would be manually raked so as to fall down into the manhole and flow toward the plant. The stop plank grooves and stop planks will raise the elevation of the overflow, thus directing more flow to the plant (Ex. H-5, R.41). The City also proposes to rehabilitate certain parts of the combined system, including pipe and manhole replacements (Ex. H-5, Table B-2).

The Board notes that dry weather overflows also were found at outfalls 0-3A and 0-5, which the City proposes to capture and treat. Also, although a storm sewer had been built, there still were extraneous flows from the combined system discharging through 0-5 from downspouts, foundation drains and infiltration; the City, after the hearing, proposed to spend an additional \$25,000 to further eliminate downspouts and increase the capacity of a proposed lift station so as to assure capture of all flows from 0-5. (Ex. H-4, R.26, City post-hearing comment 8/4/86).

Another potential impact on the CSO system would occur if new development, which is anticipated, occurs because of construction of a new expressway on the western edge of the City. Along with storm sewers, the City would construct sanitary sewers as well as a lift station and forcemain, and direct the sanitary flows to the existing combined interceptor upstream of the treatment plant. The City felt, although it had no documentation, that flows from new development would have no impact on the quality of the upstream overflows, and estimated that sending the sanitary sewer flow directly to the STP would cost an additional \$125,000-\$150,000. (R. 100).

#### Environmental Impact

The City asserted that its proposal will remove 92% of the pollutants which would be removed by full compliance with the Board's regulations. The City asserted, and the Agency did not disagree, that the environmental impact on the ravines and the Vermilion River are minimal. In 1985, two field inspections were made jointly by the Agency and the City, in addition to one made by the City alone. Minimal debris and deposits were observed (R. 37).

No biological surveys were performed; all assessments were based on visual observation. Five overflow points were inspected four times. (Ex. G, p.2) Small amounts of sewage related debris were observed at 0-1, 0-2 and 0-4 Ex. D, p. 1-33, Ex. G. p. 2-7). The City asserts that the bar grates will alleviate the situation. Ponding adjacent to 0-2 and 0-4 containing sewage deposits, and sometimes odors, were observed (Ex. D, R.42). The ponding formed by CSO-0-4, which also discharges the STP effluent appears to be unavoidable (R. 91). Sludge banks were not present

(Ex. D, G). There appeared to be no impact on the Vermilion River (Ex. D,G).

In general, the ravine beds meander through "rock outcropping, sand and gravel bars, and clay deposits". (Ex. H-4). None have been channelized and there are no significant log jams or vegetative debris. Regarding land use, it is in an undeveloped/natural state. (Ex. H-4, D,G). Except at 0-4, which also discharges the STP effluent, the stream beds' flows are intermittent, with flow occurring solely from rainfall run-off and overflows.(R.97). The City stated that all the ravine land is privately owned (in part by Lone Star Industries, R. 91), and is quite inaccessible because of the initial steep drops, a railroad embankment which acts as a barrier, another drop, and outcroppings. The area is heavily overgrown with trees and brush along the way before the River is reached. It was noted however, that in picture #12 of the Petition, boards were nailed to a tree near 0-2, possibly for climbing. (Pet. R. 89, 94-96).

In general, the City asserts that the overflows have no significant impacts on the ravine streams, the River, or the river valley in general. In support, it notes that increasing numbers of game fish, as well as rough fish, abound in the River. It states that, when the improvements are made at the overflows, "there should be little possibility of a polluttional problem resulting from the existing overflows". (Ex. G, P. 10)

#### Economic Impact

The City asserts that the full compliance cost of \$8,934,000 in capital expenditures plus annual operations and maintenance (O&M) and debt service of \$1,323,800 would, over 20 years at a 10% interest rate, increase the user rate to \$78.80/mo (based on 1400 users). In contrast, if the exception is granted, the capital cost would total \$1,600,000, plus annual O&M and debt service costs of \$216,000, resulting in a \$17.59/mo. user rate. (Ex. H-1).

The assessed valuation of the City between 1978 and 1985 has declined from \$20,661,000 to \$17,093,000, due mainly to a downward reassessment of local industry and an increase in homestead exemptions.

The City's present (April 30, 1986) bonded debt is \$757,382. Two of the bond issues, totalling \$365,000, were incurred to pay for storm sewers (\$300,000) and for other improvements in the industrial park at the west end of town. These improvements in turn allowed the City to receive a \$300,000 grant from the Department of Commerce and Community Affairs. The grant money was loaned to a company which was to pay off the two bond issues; however, the company is in Chapter 11 bankruptcy. Overall, City revenues have remained basically the same. The

City's property tax levy is at its maximum, so additional sewer fees may have to be imposed to pay for the project. As of April 30, 1986, the City's total deficit was about \$150,000. (R. 112-117).

### Agency Concerns

The City's initial submittal to the Agency for exception was rejected. This submittal was much less substantial than that ultimately chosen by the City in its single Petition. By the time the submittal was upgraded, too little time remained for Agency review prior to "signing on" as a co-petitioner. However, at the end of hearing, and following review of post-hearing data, the Agency still remains unwilling to be a co-petitioner in support of a permanent exception. Nevertheless, while not acting as a co-petitioner, the Agency does support a "provisional" exception, with conditions, to expire one year after the anticipated completion date of the improvements. Prior to expiration of the temporary exception, and before granting a permanent exception, the Agency recommends that hearing be scheduled, at which the City should justify the efficacy of the improvements or proposed further improvements.

The Agency's continuing concerns include:

a) The effects on the combined sewer system of the planned force main and pumping station to accommodate growth near the new expressway. The Agency recommends that as a condition of the temporary exception, no new significant expansion be allowed in the service area tributary to combined sewers until the City can show that the existing overflow problems will not be aggravated.

b) Regarding ponding below the outfalls, the Agency recommends that the ravines below the outfalls be inspected annually, and that, except for the present ponding area below CSO 0-4, any ponding areas be removed where feasible and practical.

c) Add as conditions to the temporary exception those measures to which the City has agreed, i.e., eliminate overflows at 0-3A and 0-5; the City's street sweeping program; the City's representations as to reductions of infiltration and inflow, inspection of diversion chambers, and construction of storm sewers. The Agency feels that these activities are important to keep the environmental impacts minimal.

d) The Agency further recommends that assessment of performance efficiency be undertaken on a frequent basis concerning "Phase II" inspection (presumably referencing the Agency's CSO technical guidelines) below the outfalls with some assessment of overflow frequency, duration, and quality at all outfalls.

The Agency also states that "the Board may properly find that the level of justification required of a single petition has been satisfied by the City". (Agency Comments, p. 4).

Finally, the Agency asserts that grant of an exception on a temporary basis would not affect grant funding and indicates that it would not interfere with the MCP approval process. (Agency Comments, R. 121-127).

Board Conclusions:

The Board shares the Agency's concerns and generally agrees with its proposed temporary exception approach, although with additions to and more specificity than, the Agency's recommended conditions. The Board notes that it will time the temporary exception to the implementation schedule attached to the City's 8/21/86 post hearing letter, which lists "Phase I" completion as July 1, 1988 as the point of "Full Plant Operation and Meeting NPDES Limits." In the absence of information to the contrary, the Board will assume that this deadline also applies to the CSO upgradings. However, the temporary exception will be timed so as to allow two years from the July 1, 1988 completion date to gather post-full operation data. The Board will also retain jurisdiction.

Regarding the constraints on expansion of the service area, the Order allows the City, by way of motion for modification, to request the Board to allow hook-ons beyond the residential 15 Population Equivalent (PE) limitation. (see Paragraph 3 of the Order). The Board cautions the City that it must submit justification data of sufficient specificity for the Board to evaluate the hydraulic effects of the new loadings on the system, including upstream-overflows, and the effects on the quality of the overflows.

The Board, additionally, will require that the City, as a single petitioner, gather the additional data in Section 306.361(b) and (c), of Board regulations as required by Section 306.362 unless the City can, pursuant to 306.361(d), provide a justification for its inapplicability. The Board notes that, even if this is an agreed minimal impact situation, the absence of the Agency presently as a co-petitioner triggers in these provisions. The Board also notes that the City has failed to provide sufficient information pursuant to Section 306.361(a), much less (b) and (c), particularly regarding frequency and extent of overflow events and limited stream chemical analyses.

The purpose of these provisions was to avoid just such a situation as found in this proceeding. The Board also notes that the City will be required to file an amended petition for permanent exception, following which the Board will schedule a hearing.



In summary, the Board finds that, taking into account the factors contained in 27(a) of the Act, the City of Oglesby has not justified a permanent exception, but has justified a temporary exception, with conditions.

This Opinion constitutes the Board's findings of fact and conclusions of law in this matter.

ORDER

1. Except as provided in Paragraph 2 of this Order, the City of Oglesby is granted a temporary exception until July 1, 1990 from 35 Ill. Adm. Code 306.305(a) regarding first flush of storm flows and from 35 Ill. Adm. Code 306.305(b).
2. If, on or before March 1, 1990, the City of Oglesby fails to submit an amended petition for exception, this temporary exception will terminate on March 1, 1990.
3. During this temporary exception period the City of Oglesby, in consultation with the Agency, shall, as a minimum:
  - a) Comply with the provisions of 35 Ill. Adm. Code 306.361(b) and (c) unless, pursuant to subsection (d) the City includes a justification in its amended petition for the inapplicability of the required evaluations, or the Agency as a joint petitioner agrees that there is a minimal discharge impact.
  - b) Unless authorized by the Board upon a petition for modification of this order, there shall be no expansion of the service area tributary to the combined sewers except for residential hookups that do not exceed 15 population equivalents as defined in Ill. Adm. Code 301.345.
  - c) The City shall inspect annually the ravines below all outfalls for ponding and, except for the present ponding below CSO 0-4, shall either timely eliminate all ponding or justify in the amended petition that elimination is technically infeasible or economically unreasonable.
  - d) The City of Oglesby shall continue its present street sweeping program and its proposed program of reducing infiltration and inflow, inspection of diversion chambers, and construction of storm sewers.
  - e) Pursuant to Ill. Adm. Code 306.361(a) the City shall continue to inspect below the outfalls at least twice yearly for unnatural bottom deposits, odors, unnatural floating material or color, stream morphology, and results of limited stream chemical analysis; the City

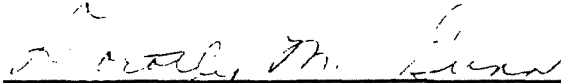
also shall measure and test overflow events at CSO-0-1, 0-2 and 0-3 sufficient to determine their frequency, extent, and quality.

4. The Board will retain jurisdiction in this matter.

IT IS SO ORDERED.

B. Forcade dissented.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 5<sup>th</sup> day of February, 1987, by a vote of 5-1.

  
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Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board