

RESOLUTION NO. 10, 2000
A RESOLUTION REGARDING THE DESIGN AND
CONSTRUCTION OF THE WEST SIDE SEWER

WHEREAS, various residential developments are proposed for the areas west and southwest of the City of Valparaiso, and

WHEREAS, it is in the interest of the City of Valparaiso to provide sanitary sewer service to those developments, and

WHEREAS, there are no City of Valparaiso sanitary sewers available to serve the aforementioned developments or any other potential sewer user in the areas west and southwest of the City, and

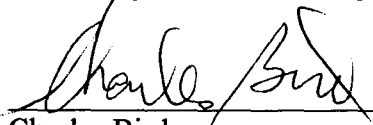
WHEREAS, the design study completed by Cole Associates and recently revised by DLZ Engineers has determined that the construction of a "West Side Sanitary Trunk Sewer" to serve the areas west and southwest of the City is feasible and has set a potential service area for that sewer, and

WHEREAS, the members of the Common Council of the City of Valparaiso have discussed the merits of the construction of said "West Side Sanitary Trunk Sewer" and have determined that the benefits of said construction are equal to or exceed the costs;

NOW THEREFORE BE IT RESOLVED, by the Common Council of the City of Valparaiso, Indiana, that

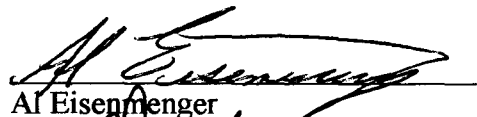
1. The Common Council of the City of Valparaiso supports and approves the concept of the "West Side Sanitary Trunk Sewer".
2. The Common Council of the City of Valparaiso urges the administration and staff to prepare the Project Documents (Plans and Specifications) for said sewer as soon as is practical during the year 2000.
3. The Common Council for the City of Valparaiso urges the administration and staff to obtain bids as soon as is practical for the construction of said sewer in the year 2001.

ADOPTED this 8th day of May, 2000 by a 6-0 vote of all members present and voting.

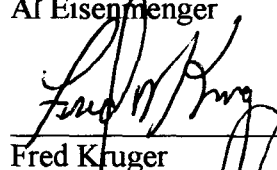

Charles Bird

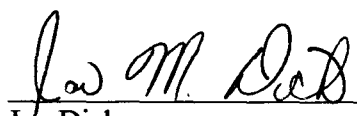
absent
Aaron Carlberg


Joey Larr


Al Eisenmenger

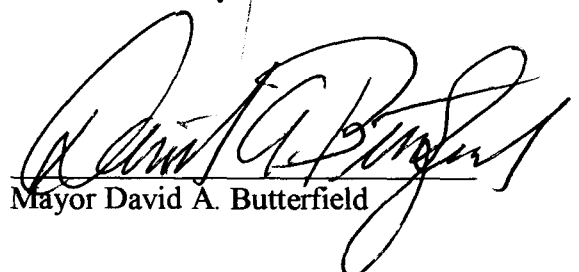

Donald Ragsdale


Fred Kruger


Jan Dick

ATTEST:


Sharon Swihart, Clerk Treasurer


Mayor David A. Butterfield

**MALCOLM
PIRNIE**

**STREAM REACH CHARACTERIZATION AND
EVALUATION REPORT**

CITY OF VALPARAISO, INDIANA

**SEPTEMBER 1997
REVISED JULY 1999**

**MALCOLM PIRNIE, INC.
ENVIRONMENTAL ENGINEERS, SCIENTISTS & PLANNERS
8440 Woodfield Crossing Blvd., Suite 175
Indianapolis, IN 46240-4300**

EXECUTIVE SUMMARY

The Federal Combined Sewer Overflow Control (CSO) Policy includes "nine minimum controls" that dischargers with combined sewers must meet. The ninth minimum control is "monitoring to effectively characterize CSO impacts and the efficacy of CSO impacts." The Indiana Combined Sewer Overflow Strategy, issued in April 1996, proposed that Indiana permittees address the ninth minimum control with a "Stream Reach Characterization and Evaluation Report."

One way of characterizing CSO impacts is through biological monitoring of the aquatic life upstream, downstream and within the portion of the stream receiving CSO discharges. The types and diversity of fish and benthic macroinvertebrates (aquatic insects that live on the stream bed) indicate the impacts of the pollution in a stream. The Ohio Environmental Protection Agency has adopted a series of indices to measure and compare the biological health and diversity (and pollution impacts) in streams. An advantage of this method of stream characterization is that a stream's biological community is exposed to water conditions on a continuous basis. Barring habitat degradation, the success of the organisms in the stream is considered to be a better measurement of water quality than chemical monitoring. This approach was selected to characterize the effects of CSOs on Salt Creek. The ecology of Indiana and Ohio streams are similar, and the Ohio indices are considered to be a good indication of the biological health of Salt Creek near Valparaiso.

Stream habitat, and benthic macroinvertebrate evaluations were conducted in the summer of 1996 at three sites in Salt Creek in and near Valparaiso:

- Site UCS1, upstream of CSOs
- Site WCS2, the "nearfield" site, within the CSO area
- Site DC53, the "farfield" site, downstream of CSOs

Aquatic biologists evaluated the habitat of Salt Creek at the three sites using Ohio EPA techniques to determine the potential effects physical characteristics of the creek have on stream biology. The Salt Creek habitat was found to be capable of supporting a well-balanced aquatic community.

Fish sampling was conducted by electroshocking the stream at the three sites. This technique temporarily stuns the fish in the vicinity, allowing the fish to be collected by biologists for counting, species identification, weighing and length measurement. After sampling and measurement, the fish were returned to the creek unharmed. The measurements were used to calculate the "Index of Biotic Integrity" and the "Modified Index of Well Being" using Ohio EPA techniques.

The benthic macroinvertebrate sampling was conducted by setting special sampling boxes in the stream bed at each of the three sites. After a period of several weeks, biologists collected the boxes and identified the number and species of macroinvertebrates ("bugs") that had been collected. The measurements were used to calculate the "Invertebrate Community Index."

The fish survey found eight species of fish at the upstream site and nine each at the two downstream sites. The fish survey found no significant impacts, positive or negative, upstream and downstream of the CSO discharge points. The fish communities at the three sites were found slightly below what would be expected in an undisturbed stream in the ecoregion. The slight degradation of the Salt Creek fish community is not attributed to CSO discharges since all three sites had approximately the same MIWB scores. One possible explanation for the slight degradation of the fish community relates to possible predation by the introduced steelhead trout on the smaller, native fish in Salt Creek.

The microinvertebrate sampling found good water quality conditions and did not indicate water quality degradation downstream of the CSO discharge points. The favorable microinvertebrate community may be indicative of future improvements in the fish community in Salt Creek.

The biological sampling conducted in the summer of 1996 indicate that current CSO controls are adequately protecting aquatic life in Salt Creek. Planned improvements to Valparaiso's CSO basins will provide additional protection for aquatic life.

6.0 CONCLUSIONS

6.1 FISH COMMUNITY

The fish survey indicates no significant positive or negative change upstream and downstream of the CSO discharge points. The fish community is slightly below what might be expected of a fish community in an undisturbed stream in this ecoregion. The slight degradation could be a result of either area wide non-point source pollution, stream instability, or the presence of large numbers of "introduced" Steelhead trout. The trout are stocked by the State of Michigan to provide game fish for sports fishing. The characteristics of Salt Creek are clearly favorable for this fishery. Anglers from Indiana and surrounding states frequent Salt Creek near Valparaiso for the excellent Steelhead fishing. These large fish, generally greater than ten pounds each, may play a role in reducing the numbers of other small fish in Salt Creek through predation.

The lack of significant upstream/downstream differences supports the conclusion that the current CSO system is not inhibiting attainment of aquatic life use of Salt Creek. The siltation problem downstream on Salt Creek appears to be the result of development in both the Salt Creek basin and the neighboring Beauty Creek basin. The sand and silt load carried by Beauty Creek, a tributary of Salt Creek, is a potential cause of water quality impairment. Changes in land use, high tillage farming practices, and other changes that influence stream hydrology can influence the stability of Salt Creek. These factors are equally or more important than the current CSO system in terms of their ability to cause degradation of the fish community.

The presence of an active sport fishery for the introduced Steelhead trout certainly supports the contention that the waters of Salt Creek are "fishable." The presence of a few native brown and rainbow trout further supports this argument.

6.2 MACROINVERTEBRATE COMMUNITY

In general, the macroinvertebrate community is performing better than the fish community. Macroinvertebrates' capability of recolonizing more quickly than fish may be an indication that

Valparaiso can expect future improvement in the fish populations as new species are able to colonize the area. The macroinvertebrates currently present in the stream indicate good water quality conditions and do not suggest any degradation downstream of the CSO discharge points.

6.3 STREAM HABITAT

The habitat currently present in Salt Creek in the study area is capable of supporting a well-balanced aquatic community. Recent changes in the Beauty Creek tributary and the silt and sand loading observed in areas downstream of Valparaiso pose a potential threat to the habitat. If development of the upper Salt Creek watershed occurs without appropriate stormwater management practices, the habitat in the CSO receiving area could be affected. These potential stream-habitat threats also pose a threat to the aquatic life use attainability; this threat is equal to or greater than any threat from the CSO system.

6.4 CSO CONTROLS

The existing aquatic life demonstrates that current CSO controls are adequately protective of aquatic life uses. Proposed improvements to Valparaiso's wastewater treatment plant and CSO basins will further protect the in-stream aquatic communities.