

## EXECUTIVE SUMMARY

PDG prepared this Combined Sewer System Long-Term Control Plan on behalf of the Village of Oak Harbor. The Village has continued to work with Ohio EPA in regard to the CSO problems as they relate to the community, the Portage River, and surrounding area. As far back as 20 years ago, the Ohio EPA and the Village had extensive communications regarding securing land for transporting, storage, and treatment of storm-related waters. Based on these discussions, the Village procured property and have since based their focus on this idea of transport, store, and treat.

Notwithstanding this apparent direction in which the Village was considering and knowing other communities and cities have recently been allowed to “transport, store, and treat”, PDG’s objective was to justify the most economical and efficient option for Oak Harbor. PDG examined basically four (4) alternatives – separation of storm and sanitary; transport, store, and treat (with existing plant capacity); transport and immediately treat (with additional plant capacity); and end-of-line treatment of the existing 9 CSOs present in the CSS.

Taking all things into account, including not limited to the Village’s philosophy, proposed land use projections, antidegradation issues, costs, and timing of projects brought PDG to the conclusion that the best approach for Oak Harbor would be to reduce the total number of CSOs, install another transportation sewer to the wastewater treatment plant area, add a storage retention basin, and utilize the existing plant and its capabilities to treat the retained water when appropriate. Its projected \$2.8 million cost is less than the \$4.6 million transport and treat with wastewater treatment plant expansion option and also less than the \$6.7 million complete separation of sanitary and storm. The end-of-line option was ruled out in the early stages due to the paramount fact that it would be too labor intensive to maintain and operate at least 9 “settling and disinfection” systems throughout the Village.

The recommended approach of an additional transport sewer, storm retention basin, and appropriate ancillary equipment to bring it to the existing wastewater treatment plant for treatment will take approximately 12 months to build after proper EPA and funding protocols and approvals.

These approvals are estimated to take 30 to 36 months after this Long-Term Control Plan is approved.

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

This CSO Long-Term Control Plan provided a general review of Ohio's Combined Sewer Overflow Strategy along with developing collection and treatment alternatives for meeting current National Pollutant Discharge Elimination System (NPDES) requirements.

Three (3) sewer collection alternatives were developed and analyzed. Alternative No. 1 proposed the construction of a new separated sanitary sewer system which consists of constructing approximately 60,025 lineal feet of conventional gravity sewers. Alternative No. 2 included the construction of CSO interceptor trunk sewer (based on actual flow monitoring) which will collect storm event overflows and then transfer by gravity to a pump station then to an off-line retention basin and then into existing wastewater treatment plant under controlled conditions for primary and secondary treatment. Alternative No. 3 consists of an interceptor line (Like #2) but construction of additional treatment capacity of the plant – i.e., additional primary settling followed by disinfection.

### Recommendations

Based on the preliminary findings of this report and on-going discussions with Village officials, it is our recommendation that the Village of Oak Harbor consider as their combined sewer long-term strategy Alternative No. 2 - the construction of the trunk interceptor sewer system along with the proposed screening, pumping, and storm retention at an estimated cost of \$2,753,325.

This alternative will require additional pumping and handling of storm related flows which will relate to increased operation and maintenance costs, but the overall impact of construction costs associated with individual sewer separation will be less.

Table 31 typically indicates the normal time required for completion of such a project. It is projected that the project will be completed approximately 4 years after Long-Term Control Plan approval.

**TABLE 31  
PROPOSED SCHEDULE OF EVENTS  
ALTERNATIVE NO. 2**

No.	Task	No. of Months After Approval of Long-Term Control Plan or LTCP by Ohio EPA
1	Prepare and submit funding applications to the following: - Ohio EPA - Ohio Public Works Commission - USDA Rural Development - Ohio Water Development Authority	6
2	Upon receiving affordable planning and construction funding, begin design of the proposed improvements	12
3	Complete funding applications along with engineering design and submit to funding agencies and to Ohio EPA for review and approval	24
4	Receive funding agency's and Ohio EPA's approval for construction	30
5	Start construction of the CSO interceptor trunk sewer screening and pumping facilities and retention basin	36
6	Complete construction of the CSO interceptor trunk sewer screening and pumping facilities and retention basin	48



\* COULD NOT FLOW MONITOR, CSO PIPE SUBMERGED

**Legend**

- Storm Sewer
- Sanitary Sewer
- CSO Sewer
- CSO Regulator
- Sanitary Lift Station
- Storm Sewer Lift Station
- CSO Number

REFERENCE:  
ACAD DWG  
R. JACKSON  
06/26/02

JOB #1590-096  
FILE: PLATE17.DWG

**FLOW MONITORED  
PROPOSED INTERCEPTOR SEWER  
ALTERNATIVE NO. 2**

OHIO

**PLATE SEVENTEEN**

**VILLAGE OF OAK HARBOR  
LONG TERM CONTROL PLAN**

**POGGEMEYER DESIGN GROUP, INC.**  
ENGINEERS + ARCHITECTS + PLANNERS