

SUMMARY OF PROPOSED LONG-TERM CONTROL CSO ALTERNATIVES

The CSO Long-Term Control Plan includes the construction of a separated gravity sewer collection system referred to as Alternative No. 1 at an estimated project cost of \$9,196,894 which includes estimated costs of \$1,498,500 for residential and commercial building service connections and removal of non-sanitary flows.

Alternative No. 2 includes the construction of an interceptor trunk gravity sewer system to be constructed – parallel to the existing 27" line – for collection and delivery of storm related flows from the West Branch CSO structure to the existing wastewater treatment location. The treatment of wet weather flows that exceed secondary treatment capacity will consist of primary settling utilizing the existing storm water retention basin followed by disinfection before discharging to the creek via a separate outfall than the WWTP outfall. The existing treatment plant will be utilized as the first option to treat the retained water through secondary treatment. If this option is not available, or is being fully utilized, then the retention pond will continue to fill and discharge out to the creek passing through disinfection enroute to the outfall. In addition, the Hurlbut Ditch will be redirected to State Route 600 Ditch in order to eliminate over 500 acres of drainage area into the West Branch CSS. The total cost for this alternative is \$3,762,242.

These two (2) alternatives are summarized for comparison in the following table.

TABLE 30 IMPROVEMENT ALTERNATIVE ESTIMATED COST SUMMARY		
Alternative No.	Description	Total
1	Storm and Sanitary Sewer Separation	\$9,196,894.00
2	Combined Sewer Collection, Additional Transport Capability, Storage in Existing Retention Basin with Treatment Options of Secondary Treatment or Primary with Disinfection along with Hurlbut Ditch Redirection to State Route 600 and Township Road 42	\$3,762,242.00

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.

Two (2) 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 62,000 lineal feet of conventional gravity sewers. Alternative No. 2 included the construction of a CSO interceptor trunk sewer parallel to existing 27" diameter line which would collect storm event overflows from the West Branch system and then transfer by gravity to a pump station then into the storm water retention basin for primary and secondary treatment. Any flow not handled by the WWTP will be then discharged out of the basin through disinfection to the creek. There is also the need to redirect Hurlbut Ditch out of the CSS and in doing so, reduce the drainage acreage and thus the "burden" on the existing WWTP and its retention basin.

Recommendations

Based on the preliminary findings of this report and on-going discussions with Village officials, it is our recommendation that the Village of Gibsonburg consider as their combined sewer long-term strategy, Alternative No. 2 - the construction of a parallel west side trunk interceptor sewer system along with the wet weather clarification and chlorination/dechlorination disinfection before discharge to the creek if the WWTP can't treat the total volumes. This, in conjunction to redirecting the Hurlbut Ditch will reduce the total overflow events to 4-6 per year.

Table 31 typically indicates the normal time required for completion of such a project. In Gibsonburg's case the project will be completed approximately 4.5 years after Ohio EPA's approval of this Long-Term Control Plan. It is also recommended that flow and rain monitoring be completed in conjunction with the West Branch bank CSO interceptor after the Hurlbut Ditch is redirected, and the West Branch CSO structure has been modified, in order to determine peak flows during rain events that occur 3-4 times per year. In that way, the interceptor, but more importantly the pump station and disinfection/dechlorination design requirements can be recalculated with actual peak

flow design parameters. The result should allow for downsizing of the interceptor, pump station, and disinfection improvements.

TABLE 31 PROPOSED SCHEDULE OF EVENTS ALTERNATIVE NO. 2		
No.	Task	No. of Months After Approval of Long-Term Control Plan from Ohio EPA
1	Complete design and funding application of Hurlbut Ditch Relocation (Alternative B) to State Route 600 and Township Road 42	6
2	Complete construction of the ditch relocation	12
3	Complete flow monitoring of the existing 48" diameter combined sewers after Hurlbut Ditch relocation. Upstream of West Branch CSO to include the 48" diameter interceptor and combined sewers, and downstream of West Branch of CSO in existing 27" diameter interceptor to determine design flows without the influence of Hurlbut Ditch	24
4	Evaluate flow monitoring data and submit a CSO Long-Term Control Plan Addendum for additional long-term control plan improvements	30
5	Begin design and funding application submittal for the proposed long-term control plan improvements	30
6	Complete funding applications along with engineering design and submit to funding agencies and to Ohio EPA for review and approval	36
7	Receive funding agency's and Ohio EPA's approval for construction	42
8	Start construction of the CSO interceptor trunk sewer screening and pumping facilities and retention basin	48
9	Complete construction of the CSO interceptor trunk sewer screening and pumping facilities and retention basin	60
Note: Item Nos. 1 and 2 will be considered as Phase I. Item Nos. 3 through 8 will be considered as Phase II.		



REFERENCE:
 ACAD DWG
 R. HEYMAN
 3/30/04
 JOB #1630-046
 FILE: AFHMS2DWG

**PROPOSED ROUTE FOR
 HURLBUT DITCH RELOCATION**

PLATE TEN



**VILLAGE OF GIBSONBURG
 CSO LONG TERM
 CONTROL PLAN**



