

EXECUTIVE SUMMARY

PDG has prepared this Combined Sewer System Long-Term Control Plan on behalf of the Village of Woodville. This Long-Term Control Plan submittal to the Ohio EPA does fulfill a requirement of the Village's NPDES permit along with state and federal regulations. PDG's objective was to evaluate and justify the most efficient and cost effective alternative for complying with Ohio's CSO Strategy.

Woodville's wastewater treatment plant was built in 1971 and a second lagoon cell was constructed in 2000. The lagoon system is designed for an average daily flow of .300 mgd. The Village is currently working on a wet weather stress test to verify the wastewater treatment's ability to treat flows that exceed the design capacity. It is in the best interest of the Village to maximize flows through the facility and in doing so, will decrease the number of CSO discharges. The existing sewer system is a combined system which consists of an interceptor sewer that delivers all dry weather flows to the wastewater treatment system. When this interceptor exceeds its carrying capacity during storm events, the interceptor will overflow through sixteen (16) permitted CSOs. All of the overflows discharge into the Portage River.

Taking all things into account including, but not limited to, the Village's philosophy, proposed land use projections, antidegradation issues, alternative costs, and timing of the alternative projects brought both the Village and PDG to the conclusion that the best approach for Woodville would be to eliminate all CSO structures and greatly reduce storm waters from the sanitary by installing a combination of new sanitary sewers in some areas and new storm sewers in other locations. The estimated cost of \$6,066,080 is comparable to other alternatives studied – with the separation of sewers having the benefit of treating all sanitary flows and at the same time reducing flows to the treatment facility.

This sewer separation approach is estimated to take ten (10) years once this LTCP has been approved. During the period of time, it is suggested that the Village consider additional sewer evaluation work and residential inspections in order to assure as much storm water will be removed from the "proposed" separate sanitary sewer system.

The Village as part of an agreement to separate sewers requests that Ohio EPA modifies the current NPDES permit to allow for the conversion of the existing continuous lagoon to a controlled discharge lagoon at the end of the ten (10) year sewer separation program.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

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

Two (2) long term control alternatives were developed and analyzed. Alternative No. 1 proposed the construction of a new separated sanitary sewer system which consists of constructing approximately 38,883 lineal feet of conventional gravity sewers at an estimated cost of \$4,716,079. Alternative No. 2 included the construction of some storm and sanitary separation with storm water pumping and retention at an estimated cost of \$3,225,164.

Recommendations

Based on the preliminary findings of this report and on-going discussions with Village officials, it is our recommendation that the Village of Woodville consider as their combined sewer long-term strategy, Alternative No. 1 - the construction of a new separated sanitary sewer system which consists of constructing approximately 38,883 lineal feet of conventional gravity sewers.

The normal time required to secure appropriate funding, design and construction for a project of this magnitude is approximately five (5) years. Due to the Village's financial capabilities it may only be possible to complete the sanitary sewer separation (CSO elimination) project over a ten (10) year period.

Table 15 illustrates a proposed schedule of events for a ten (10) year completion period. The sanitary sewer separation project will be constructed in three (3) phases with a ten (10) year completion date. Each of the three (3) phases will be constructed every 3.33 years (40 months).

**TABLE 15
PROPOSED SCHEDULE OF EVENTS (10 YEARS)**

No.	Task	No. of Months After Approval of Long-Term Control Plan by Ohio EPA
PHASE 1		
1	Prepare and submit appropriate funding applications to complete the project	4
2	Upon receiving affordable planning and construction funding, begin design of the proposed improvements	10
3	Complete funding applications along with engineering design and submit to funding agencies and to Ohio EPA for review and approval	18
4	Receive funding agency's and Ohio EPA's approval for construction	22
5	Start construction Phase 1	28
6	Complete construction Phase 1	40
PHASE 2		
1	Prepare and submit appropriate funding applications to complete the project	44
2	Upon receiving affordable planning and construction funding, begin design of the proposed improvements	50
3	Complete funding applications along with engineering design and submit to funding agencies and to Ohio EPA for review and approval	58
4	Receive funding agency's and Ohio EPA's approval for construction	62
5	Start construction Phase 2	68
6	Complete construction Phase 2	80
PHASE 3		
1	Prepare and submit appropriate funding applications to complete the project	84
2	Upon receiving affordable planning and construction funding, begin design of the proposed improvements	90

**TABLE 15
PROPOSED SCHEDULE OF EVENTS (10 YEARS)**

No.	Task	No. of Months After Approval of Long-Term Control Plan by Ohio EPA
3	Complete funding applications along with engineering design and submit to funding agencies and to Ohio EPA for review and approval	98
4	Receive funding agency's and Ohio EPA's approval for construction	102
5	Start construction Phase 3	108
6	Complete construction Phase 3	120

Construction and project costs will increase every year due to inflation. If the Village elects to complete the project over a 10 year period, the total project cost is estimated to increase an additional \$297,552.00. This increase is based on a three (3%) percent annual inflation rate. The total estimated project cost is \$5,607,858 versus \$5,310,306 for the five year completion.

The increase in construction and project costs could actually be offset by being able to secure additional grants for a phased project versus a single project. This is due to the fact that the Village can re-apply through the same grant programs for each of the three (3) phases. A further discussion on financing sources and options for the 10 year schedule follows this section.

The Village of Woodville presently has sixteen (16) combined sewer overflows as previously illustrated on Plate 2 and listed in Table 1. The level of impact to the Portage River is based on the number of overflow occurrences, duration of discharge, volume of discharge and pollutants.

The suggested phased sewer separation has therefore been based on a general review of monthly operating reports and discussion with Village personnel and is listed as follows:

Phase Sewer Separation:

Phase 1 - Bid 2008

CSO Nos. 2, 3, 4, and 5

15,455 Lineal Feet Gravity Sewer

Total Estimated Project Cost: \$2,048,868

Phase 2 - Bid 2011

CSO Nos. 6, 7, 8, 10A, 10B, and 11

13,848 Lineal Feet Gravity Sewer

Total Estimated Project Cost: \$2,005,470

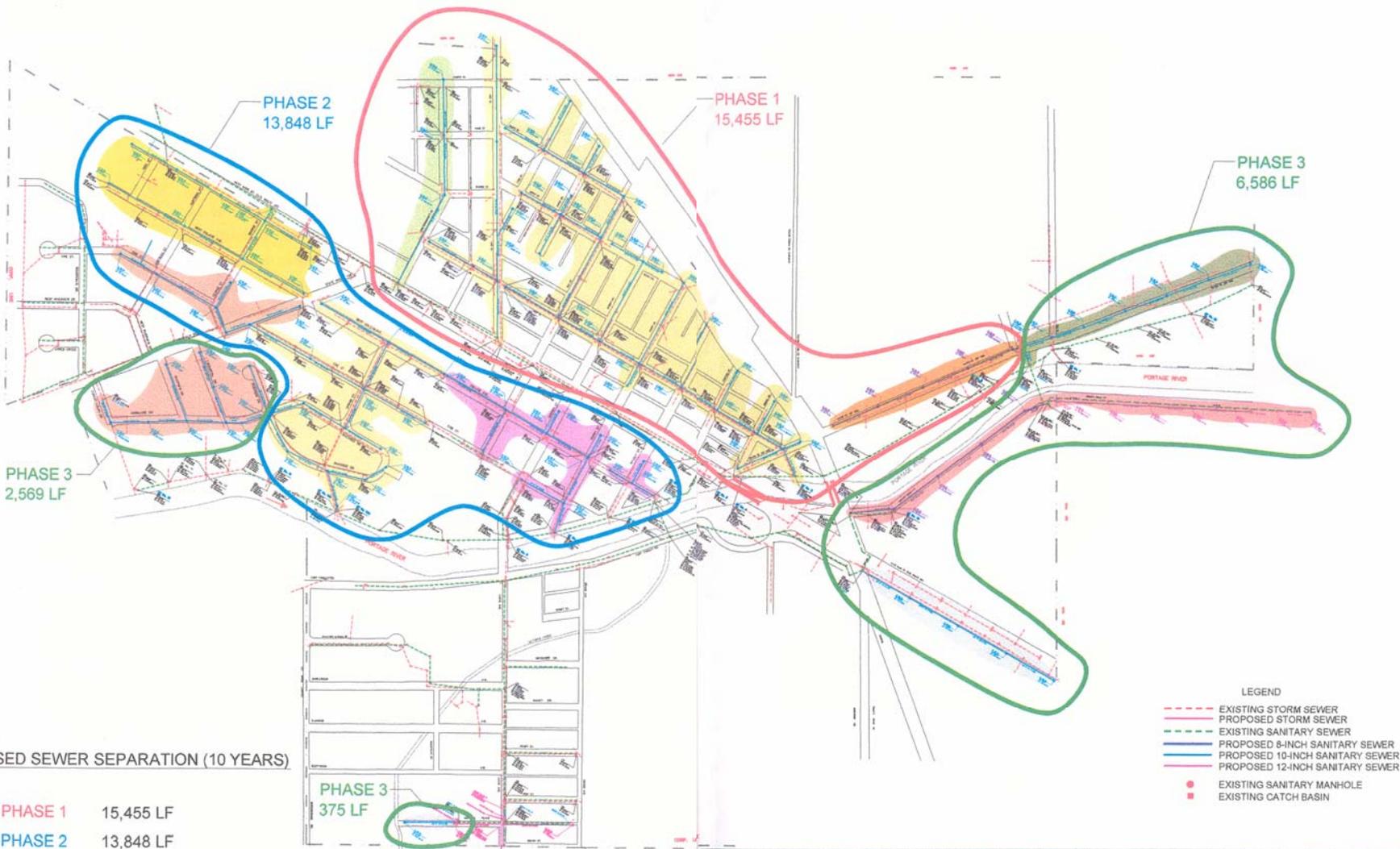
Phase 3 - Bid 2015

CSO Nos. 1, 12, 13, 14, 15, and 21

9,530 Lineal Feet Gravity Sewer

Total Estimated Project Cost: \$1,553,520

The attached plate illustrates each of the areas for phased sanitary sewer separation.



PHASED SEWER SEPARATION (10 YEARS)

PHASE 1	15,455 LF
PHASE 2	13,848 LF
PHASE 3	9,530 LF

PHASE 3
375 LF

- LEGEND**
- EXISTING STORM SEWER
 - PROPOSED STORM SEWER
 - EXISTING SANITARY SEWER
 - PROPOSED 8-INCH SANITARY SEWER
 - PROPOSED 10-INCH SANITARY SEWER
 - PROPOSED 12-INCH SANITARY SEWER
 - EXISTING SANITARY MANHOLE
 - EXISTING CATCH BASIN

REFERENCE:
ACAD DWG
R. HEYMAN
1/11/06

JOB #2010-042
FILE PLATES.DWG

**PHASED 10 YEAR
CONVENTIONAL GRAVITY SEWER
SYSTEM SEPARATION
PLATE SIX**

**VILLAGE OF WOODVILLE
LONG - TERM
CONTROL PLAN**

