OVERFLOW REDUCTION

The City of Van Wert's Combined Sewer Overflow Long-Term Control Plan considered the presumptive approach as a control option versus sanitary sewer separation. This approach based on Ohio EPA's CSO strategy established design standards for storm water collection, storage, and treatment. Within this approach there are three (3) control plans used to assume that water quality standards will be met. The control plans are listed as follows:

1. No more than four (4) overflow events per year. An overflow event is one or more overflows from a combined sewer system that does not receive minimum treatment.

2. Capture or treat no less than 85% by volume of combined sewage collected in the combined sewer system during rainfall events on a system wide annual average basis.

3. The elimination or removal of no less than the mass of pollutants identified as causing the water quality improvement.

Based on a review and understanding of the above control plans, the recent treatment plant expansion, Long-Term Control Plan, Wet Weather Stress Test, and on-going CSO data collection, the City of Van Wert has elected to pursue transport, store, and treat as their long-term approach to meeting Control Plans 1 and 2.

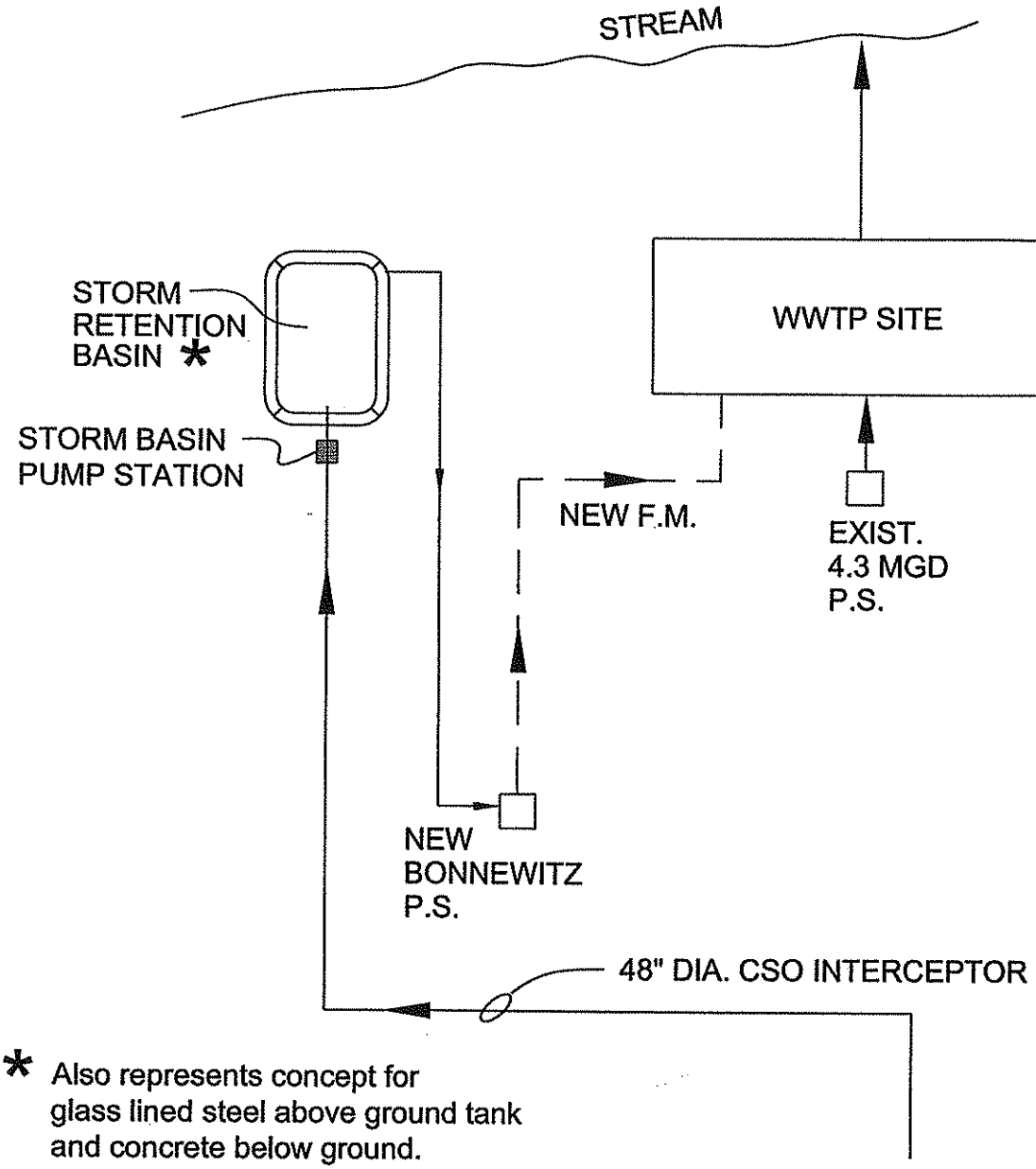
This approach will eventually reduce overflow events to no more than four (4) per year and will capture or treat no less than 85% by volume on a system wide annual average basis. This will be accomplished by increasing the pumping capacity to the existing treatment plant, maximizing the 7.75 mgd peak secondary treatment capacity, and providing additional peak primary treatment followed by disinfection. Additional work to be completed will include wet weather stress testing the wastewater treatment facility, analyzing CSO data collection, the construction of a storm retention basin or treatment, and secondary interceptor system to collect and transport storm related flows.

Through careful consideration and discussion, the City of Van Wert proposes to phase the necessary collection and treatment analysis and eventual improvements as follows:

- Phase I - Allingham/Bonnewitz Improvements
- Phase II - Wastewater Treatment Plant Wet Weather Stress Test
- Phase III - Revise Wastewater Collection and Treatment Plan (CSO Reduction Plan)

- Phase IV - Primary Treatment and Disinfection
- Phase V - Collection System Improvements

The above listed phased approach follows the Schedule of Compliance as outlined in the current NPDES Permit and is further discussed as follows:



* Also represents concept for glass lined steel above ground tank and concrete below ground.

- Storm Retention Basin would be located at new Bonnewitz P.S. site. All flows in 48" dia. interceptor would be stored and then transfered back to Bonnewitz P.S. and treated at the WWTP

- Would need to pump contents of 48" dia. interceptor sewer into storm retention basin. Pumping Capicity = 18.5 mgd.

- All flows from Bonnewitz P.S. and existing 4.3 mgd P.S. would be treated at WWTP.

REFERENCE: ACAD DWG R. HEYMAN 6/9/06 JOB #1140-006 FILE: PLATE12.DWG	STORM RETENTION BASIN ALTERNATIVE NO. 1 PLATE TWELVE	CITY OF VAN WERT CSO REDUCTION GENERAL PLAN	POGGEMEYER DESIGN GROUP

REFERENCE: ACAD DWG R. HEYMAN 6/9/06 JOB #1140-006 FILE: PLATE6.DWG	BONNEWITZ P.S. REPLACEMENT, FORCEMAIN TO WWTP, ALLINGHAM P.S. GRAVITY TO BONNEWITZ P.S. IMPROVEMENTS OHIO PLATE SIX	CITY OF VAN WERT CSO REDUCTION GENERAL PLAN

POGGEMEYER DESIGN GROUP

NEW F.M.
TO WWTP

NEW BONNEWITZ P.S. - 10 MGD

24" DIA GRAVITY SEWER
TO BONNEWITZ

CSO #6002
580 GPM
CSO PEAK

REMOVE ALLINGHAM P.S.
FROM SERVICE

48" DIA TO STORAGE/
OR TREATMENT SITE

TOTAL 12,680 GPM
CSO PEAKS

24" DIA

48" DIA

CSO #6005
3750 GPM
CSO PEAK

CSO #6004
3540 GPM
CSO PEAK

48" DIA

21" DIA

CSO #6009
2020 GPM
CSO PEAK

CSO #6007
3030 GPM
CSO PEAK

24" DIA

12" DIA

CSO #6010
540 GPM
CSO PEAK

CORPORATION LIMITS

Town Creek

LEGEND

- SANITARY SEWER
- COMBINED SEWER
- SANITARY SEWER INTERCEPTOR
- FORCE MAIN
- CSO LOCATIONS
- 10" SS INTERCEPTOR
- 12" SS INTERCEPTOR
- 15" SS INTERCEPTOR
- 16" SS INTERCEPTOR
- 20" SS INTERCEPTOR
- 21" SS INTERCEPTOR
- 24" SS INTERCEPTOR
- 30" SS INTERCEPTOR
- 33" SS INTERCEPTOR
- 36" SS INTERCEPTOR
- 48" SS INTERCEPTOR
- 8" FORCE MAIN
- 10" FORCE MAIN

340 GPM
CSO PEAK
INTERCEPTOR SIZE
DESIGN CRITERIA

REFERENCE:
ACAD DWG
R. HEYMAN
6/9/06

JOB #1140-

FILE: PLATE9.DWG

OHIO

MONROE STREET INTERCEPTOR
ALTERNATIVE

PLATE NINE

N

CITY OF VAN WERT
CSO REDUCTION
GENERAL PLAN

POGGEMEYER
DESIGN GROUP