

VI. Evaluation of Alternatives

A. Technically feasible alternatives identified in Section V of this check-list must be evaluated for consistency with respect to the following: (Reference-Title 25, §71.21.a.5.i.).

1. Applicable plans developed and approved under Sections 4 and 5 of the Clean Streams Law or Section 208 of the Clean Water Act (33 U.S.C.A. 1288). (Reference-Title 25, §71.21.a.5.i.A). Appendix B, Section II.A of the Planning Guide.

Compliance with Sections 4 and 5 (water and watercourse pollution) of the Clean Streams Law will be maintained as the proposal to install public sewer would only act to improve the overall health of Crum Creek and its tributary areas.

2. Municipal wasteload management Corrective Action Plans or Annual Reports developed under PA Code, Title 25, Chapter 94. (Reference-Title 25, §71.21.a.5.i.B). The municipality's recent Wasteload Management (Chapter 94) Reports should be examined to determine if the proposed alternative is consistent with the recommendations and findings of the report. Appendix B, Section II.B of the Planning Guide.

Newtown Township does not have a Corrective Action Plan for its sewer system.

The most recently published Chapter 94 Reports indicate that the future of the Upper Crum Creek Watershed is to extend sewers into the service area of the Central Delaware County Authority.

3. Plans developed under Title II of the Clean Water Act (33 U.S.C.A. 1281-1299) or Titles II and VI of the Water Quality Act of 1987 (33 U.S.C.A 1251-1376). (Reference-Title 25, §71.21.a.5.i.C). Appendix B, Section II.E of the Planning Guide.

Compliance with Sections 1251-1376 (water pollution prevention and control) of the Clean Water Act will be maintained as the proposal to install public sewer would only act to improve the overall health of Crum Creek and its tributary areas. A full erosion and sedimentation control plan will be submitted to the Delaware County Conservation District.

4. Comprehensive plans developed under the Pennsylvania Municipalities Planning Code. (Reference-Title 25, §71.21.a.5.i.D). The municipality's comprehensive plan must be examined to assure that the proposed wastewater disposal alternative is consistent with land use and all other requirements stated in the comprehensive plan. Appendix B, Section II.D of the Planning Guide.

Newtown Township has adopted a Comprehensive Plan. The alternate of choice is consistent with comprehensive planning for Newtown.

5. Antidegradation requirements as contained in PA Code, Title 25, Chapters 93, 95 and 102 (relating to water quality standards, wastewater treatment requirements and erosion control) and the Clean Water Act. (Reference-Title 25, §71.21.a.5.i.E). Appendix B, Section II.F of the Planning Guide.

Compliance with PA Code, Title 25, Chapters 93, 95 and 102 (Erosion and Sedimentation) will be maintained as the proposal to install public sewer would not adversely affect the health of Crum Creek and its tributary areas. A full erosion and sedimentation control plan will be submitted to the Delaware County Conservation District.

6. State Water Plans developed under the Water Resources Planning Act (42 U.S.C.A. 1962-1962 d-18). (Reference-Title 25, §71.21.a.5.i.F). Appendix B, Section II.C of the Planning Guide.

Compliance with State Water Plans & the Water Resources Planning Act, (water resources & river basin commissions) will be maintained as the proposal to install public sewer would not adversely affect the health of Crum Creek and its tributary areas.

A full erosion and sedimentation control plan will be submitted to the Delaware County Conservation District. General Permits for Stream Crossings, Part II Water Quality Management Permits and National Pollutant Discharge Elimination System permits would also be obtained prior to construction.

7. Pennsylvania Prime Agricultural Land Policy contained in Title 4 of the Pennsylvania Code, Chapter 7, Subchapter W. Provide narrative on local municipal policy and an overlay map on prime agricultural soils. (Reference-Title 25, §71.21.a.5.i.G). Appendix B, Section II.G of the Planning Guide.

Compliance with the State prime Agricultural Land Preservation Policy will be maintained. Infrastructure would be installed primarily in the existing rights-of-ways of Township and State Roads. Prime Agricultural Soils are found in Map Three (3).

8. County Stormwater Management Plans approved by DEP under the Storm Water Management Act (32 P.S. 680.1-680.17). (Reference-Title 25, §71.21.a.5.i.H). Conflicts created by the implementation of the proposed wastewater alternative and the existing recommendations for the management of stormwater in the county Stormwater Management Plan must be evaluated and mitigated. If no plan exists, no conflict exists. Appendix B, Section II.H of the Planning Guide.

The approved Act 167 Plan for Crum Creek will not conflict with the proposed alternate of choice for the Study area. The installation of sewers throughout Newtown will not create an adverse impact on stormwater quantity or quality.

9. Wetland Protection. Using wetland mapping developed under Checklist Section II.G, identify and discuss mitigative measures including the need to obtain permits for any encroachments

on wetlands from the construction or operation of any proposed wastewater facilities. (Reference-Title 25, §71.21.a.5.i.I) Appendix B, Section II.I of the Planning Guide.

If wetland areas, (See Map Five (5)), are encroached, the associated Army Corps permitting will be obtained during construction. Additionally close coordination with the Delaware County Conservation District will be maintained prior to and during construction.

10. Protection of rare, endangered or threatened plant and animal species as identified by the Pennsylvania Natural Diversity Inventory (PNDI). (Reference-Title 25, §71.21.a.5.i.J). Provide DEP with a copy of the completed Request For PNDI Search document. Also provide a copy of the response letter from the Department of Conservation and Natural Resources' Bureau of Forestry regarding the findings of the PNDI search. Appendix B, Section II.J of the Planning Guide.

The P.N.D.I. clearances for the individual developments, properties and affect areas by the alternate of choice are found in Attachment Eight (8).

The alternate of choice will not adversely affect the rare, endangered or threatened plant or animal species.

11. Historical and archaeological resource protection under P.C.S. Title 37, Section 507 relating to cooperation by public officials with the Pennsylvania Historical and Mu-seum Commission. (Reference-Title 25, §71.21.a.5.i.K). Provide the department with a completed copy of a Cultural Resource Notice request of the Bureau of Historic Preservation (BHP) to provide a listing of known historical sites and potential im-pacts on known archaeological and historical sites. Also provide a copy of the response letter from the BHP. Appendix B, Section II.K of the Planning Guide.

The P.H.M.C. clearances for the individual developments, properties and affect areas by the alternate of choice are found in Attachment Eight (8).

The alternate of choice will not adversely affect historic and archaeological resouces.

- B. Provide for the resolution of any inconsistencies in any of the points identified in Section VI.A. of this checklist by submitting a letter from the appropriate agency stating that the agency has received, reviewed and concurred with the resolution of identified inconsistencies. (Reference-Title 25, §71.21.a.5.ii). Appendix B of the Planning Guide.

Attached clearances for the P.N.D.I. are found in Attachment Eight (8).

- C. Evaluate alternatives identified in Section V of this checklist with respect to applicable water quality standards, effluent limitations or other technical, legislative or legal requirements. (Reference-Title 25, §71.21.a.5.iii).

The alternate of choice will be issued a Water Quality Management Permit for the proposed infrastructure and the associate six (6) pump stations. Additionally, the C.D.C.A. and

Delcora operate within their Water Quality Management Permits with respect to water quality standards, effluent limitations as well as legislative or legal requirements.

- D. Provide cost estimates using present worth analysis for construction, financing, on going administration, operation and maintenance and user fees for alternatives identified in Section V of this checklist. Estimates shall be limited to areas identified in the plan as needing improved sewage facilities within five years from the date of plan submission. (Reference-Title 25, §71.21.a.5.iv).

Cost estimate for the Alternates can be found in Attachment Nine (9).

- E. Provide an analysis of the funding methods available to finance the proposed alternatives evaluated in Section V of this checklist. Also provide documentation to demonstrate which alternative and financing scheme combination is the most cost-effective; and a contingency financial plan to be used if the preferred method of financing cannot be implemented. The funding analysis shall be limited to areas identified in the plan as needing improved sewage facilities within five years from the date of the plan submission. (Reference-Title 25, §71.21.a.5.v).

Funding options available for this project include Municipal Bonds, Delaware Valley Regional Finance Authority (DVRFA) Loan, Pennsylvania Local Government Investment Trust (PLGIT), Pennsylvania Infrastructure Investment Authority (PENNVEST), Pennsylvania Department of Community & Economic Development (DCED), Delaware County Housing Rehabilitation Program (HUD sponsored) or Developer funded. As the systems are designed funding sources will be more thoroughly investigated. A Financial Advisor has been retained to assist in the evaluation and determination of the optimal financing arrangement.

- F. Analyze the need for immediate or phased implementation of each alternative proposed in Section V of this checklist including: (Reference-Title 25, §71.21.a.5.vi).
1. A description of any activities necessary to abate critical public health hazards pending completion of sewage facilities or implementation of sewage management programs. (Reference-Title 25, §71.21.a.5.vi.A).

No phasing of the infrastructure is proposed with this Act 537 Plan Update. The proposal is to extend public sewers so that all areas of concern will be able to connect to a public system upon completion of the construction of the infrastructure.

2. A description of the advantages, if any, in phasing construction of the facilities or implementation of a sewage management program justifying time schedules for each phase. (Reference-Title 25, §71.21.a.5.vi.B).

No phasing of the infrastructure is proposed with this Act 537 Plan Update. The proposal is to extend public sewers so that all areas of concern will be able to connect to a public system upon completion of the construction of the infrastructure.

- G. Evaluate administrative organizations and legal authority necessary for plan implementation. (Reference - Title 25, §71.21.a.5.vi.D).

The Newtown Township Municipal Authority (NTMA), originally incorporated as the Newtown Township Sewer Authority, under the Municipal Authorities Act of May 2, 1945, P.L., has the ability to administer and complete the local systems expansion and participate in the regional authority system facility upgrades as required by the additional flow into the regional system.