

**The Joint Act 537 Plan was adopted by  
Warwick Township and Lititz Borough in December, 2006.  
A complete copy of the plan is available at the  
Warwick Township office, 315 Clay Road, Lititz**

***Lititz Borough and Warwick Township  
Joint Act 537 Plan Update***

**PLAN SUMMARY**

**A. Service Areas and Major Issues Evaluated**

This Joint Act 537 Plan (Plan) has been prepared by Lititz Borough and Warwick Township pursuant to the Pennsylvania Sewage Facilities Act (Act 537 of 1968 and the Pennsylvania Code, Chapters 71, 72, and 73). This Plan considers the long-term wastewater management alternatives for Lititz Borough and Warwick Township, Lancaster County. DEP approved a Task Activity Report (TAR) Amendment on March 3, 2006, to include Warwick Township, resulting in a comprehensive Joint Act 537 Sewage Facilities Plan Update. DEP approval letters are located in Appendix A of the Plan. The existing sewerage facilities within the Study Area include on-lot disposal systems (OLDS), a wastewater collection system, pump stations, and a wastewater treatment facility.

In light of recent and pending regulations impacting future wastewater treatment requirements, both Lititz Borough and Warwick Township desire to jointly update the Borough of Lititz Act 537 Plan in order to provide adequate sewage facility planning for the future. Both municipalities believe that at this juncture it is prudent to step back and complete a comprehensive review of the wastewater management issues facing the Lititz Borough wastewater treatment plant.

A significant objective of this Joint Act 537 Plan Update is to evaluate the existing wastewater treatment process and biosolids management approach in light of the pending environmental initiatives that will impact the Lititz Sewer Authority's NPDES permit and required level of wastewater treatment. Such initiatives include:

- Chesapeake Bay Tributary Strategy (PADEP)
- Lititz Run TMDL (USEPA)
- Conestoga River TMDL (USEPA)

It is expected that Pennsylvania's Chesapeake Bay Tributary Strategy will limit total nitrogen and total phosphorus discharges in the next NPDES permit renewal (2006) to be implemented by the year 2010. The approved Lititz Run TMDL will continue to limit the total suspended solids discharged from the wastewater treatment plant. The Conestoga River TMDL may also have an impact on the future nutrient limits.

## B. Selected Wastewater Management Alternative

### Selected Alternative

The Selected Alternative includes:

- Alternative 1.A Comply with Ordinance 220 On-lot and Community Sewage Disposal Systems (Warwick Township's On-lot Management Program) for unsewered areas within the Study Area.
- Alternative 3.A Five Stage BNR Process with several ancillary process upgrades including sidestream phosphorous removal, tertiary filtration, UV disinfection, Augmented Aerobic Digestion and Biosolids .Drying systems.

## C. Estimated Cost and Proposed Funding

### Summary Cost Estimates for Selected Unit Processes

| <b>Selected Unit Process</b>       | <b>Estimated Construction Cost</b> | <b>Estimated Project Cost</b> |
|------------------------------------|------------------------------------|-------------------------------|
| Five Stage BNR Process             | \$3,474,000                        | \$4,100,000                   |
| Sidestream Phosphorus Removal      | \$562,000                          | \$663,000                     |
| Tertiary Filtration System         | \$2,564,000                        | \$3,026,000                   |
| UV Disinfection System             | \$1,027,000                        | \$1,212,000                   |
| Augmented Aerobic Digestion        | \$1,590,000                        | \$1,876,000                   |
| Sludge Dryer for Class A Biosolids | \$2,080,000                        | \$2,454,000                   |
| <b>Total</b>                       | <b>\$11,300,000</b>                | <b>\$13,330,000</b>           |

The Selected Alternative includes upgrading the existing biosolids management with augmented aerobic digestion and biosolids drying systems. While not the least expensive, these systems will help significantly reduce organic and nitrogen loads recycle to the mainstream wastewater treatment process and biosolids quantities, and produce a Class A biosolids that will be readily disposable. These un-quantified advantages outweigh the calculated cost differentiators with the other biosolids management options over a 20 year operating period.

The selected unit process alternatives are not only capable of complying with the expected upcoming NPDES permit and TMDL regulations by 2010, but also to readily achieve enhanced performance to comply with potential more stringent nutrient removal requirements in the future. This exceptional treatment capacity may also add value (and possibly an economic return) should a viable nutrient trading program be established by PADEP as part of the Chesapeake Bay Initiative.

**D. Municipal Commitments**

The Plan has been provided to the Borough of Lititz and Warwick Township for review and comment. Both Lititz Borough and Warwick Township will need to adopt this Plan by resolution. The existing Lititz Sewer Authority will implement the chosen Alternative.

**E. Implementation Schedule**

The following implementation schedule is proposed to undertake the selected alternative.

| <b><u>TASK</u></b>   | <b><u>COMPLETION DATE</u></b>  |
|--|--|
| PADEP TAR Approval (PADEP)   | March 3, 2006  |
| Submit Plan for review by Lititz, Warwick and LSA  | June 30, 2006  |
| Compliance requirements established by PADEP   | To be determined   |
| Adopt Act 537 Plan by Lititz Borough and Warwick Township                                | Within 60 days of compliance requirements being established by PADEP |
| Issue for Public Comment (30 days)   | Within 30 days of Adoption by Municipalities                         |
| Respond to Public Comment  | Within 30 days of closing public comment period                      |
| Submit Act 537 Plan for Approval (PADEP)   | Within 30 days of responding to public comment                       |
| Submit Part I NPDES (if not already addressed thorough the pending permit renewal) (LSA) | Within 30 days after PADEP Approval of Plan                          |

**TASK****COMPLETION DATE**

Submit Part II Water Quality  
Management Permit  
(LSA)

Within 365 days of Part I issuance by  
PADEP

Apply and Obtain Financing (Pennvest)  
(LSA)

Within 120 days of Part II issuance by  
PADEP

Solicit Bids for Construction  
(LSA)

Within 150 days of Part II issuance by  
PADEP

Start Construction  
(LSA)

Within 240 days of Part II issuance by  
PADEP

Complete Construction  
(LSA)

Within 2 years and 6 months of Part II  
issuance by DEP

Initiate Operation of Upgraded and Newly  
Constructed Facilities  
(LSA)

Within 2 years and 9 months of Part II  
issuance by PADEP