

## Chapter 8 Community Facilities & Utilities Plan

### INTRODUCTION

#### ***Overview***

The Community Facilities & Utilities Plan focuses on municipal facilities, libraries, emergency services, water supply, sewerage and wastewater treatment, stormwater management, and energy supply. It addresses existing issues related to these facilities and seeks to coordinate the provision of facilities and services with the development pattern advocated by the Future Land Use Plan.

The Future Land Use Plan concentrates future growth in the vicinity of Routes 739 and 2001 in the form of a town center and moderate density residential development. This area is intended to absorb the majority of the projected growth, becoming the township's population center. The township should focus public facilities in this area making them accessible to the bulk of the population. This also enables more efficient delivery of emergency services, as police, fire, and ambulance have better access to a concentrated population center rather than having to serve a population dispersed throughout the township.

Utilities are planned to correspond to the intensity of uses proposed by the Future Land Use Plan. That is, where a higher intensity of uses is proposed, as in the town center and moderate density residential areas, community water supply and wastewater treatment systems or a regional authority may be appropriate. In the low-density residential area, on-lot systems are more appropriate. Again, the aim is to achieve more efficient allocation of services and reduce the widespread, adverse environmental

impacts that often arise from unmanaged growth and accompanying water and sewerage facilities.

## GOALS & OBJECTIVES

### **Goal #1**

Provide adequate water supply facilities to serve the community.

*Objectives:*

- Assess the adequacy of homeowners' associations to meet the service demands of communities.
- Devise measures to ensure that new development will be adequately served.
- Consider the desirability of a future municipal or private water authority.
- Protect water quality

### **Goal #2**

Provide adequate sewage disposal facilities to serve the community.

*Objectives:*

- Assess the adequacy of homeowners' associations to meet the service demands of communities.
- Repair failed on-lot and community septic systems.
- Maintain existing and new on-lot and community septic systems.
- Ensure that community septic systems operate within capacity.
- Ensure that new development will be adequately served.
- Consider the desirability of a future municipal or private sewer authority.

### **Goal #3**

Improve stormwater management.

*Objectives:*

- Incorporate innovative stormwater management techniques into new development.
- Address existing problems with stormwater runoff through outreach and education of landowners.

**Goal #4** Protect the township with effective emergency services.*Objectives:*

- Identify isolated and underserved areas.
- Assess the need for expanded or additional fire and ambulance stations.
- Improve emergency access.

**Goal #5** Provide sufficient municipal services.*Objectives:*

- Evaluate the adequacy of the Township municipal and library complex.
- Make municipal services accessible to township residents.

**Goal #6** Provide adequate energy supply facilities to serve the community.*Objectives:*

- Establish a natural gas distribution system.
- Upgrade electric facilities.

**EXISTING CONDITIONS****Overview**

The discussion of existing community facilities focuses on municipal facilities, emergency services, water supply, wastewater disposal, and energy supply.

**Municipal Facilities**

Municipal Building

Municipal facilities in Delaware Township include the township complex located on Wilson Hill Road. The municipal complex is approximately 130 acres. It contains:

- Municipal building with administrative offices and a public meeting room
- Public library

## Recreational facilities include:

- four baseball fields (1 field for the senior league, 1 short field for kids, and two full-size fields for adults), a half tennis court, a skateboard park, a playground, a pavilion, a fitness trail, a walking trail.

**Emergency Services**

Delaware Township operates an ambulance service and a volunteer fire company; law enforcement is provided by the Pennsylvania State Police. The ambulance station with one vehicle is located on Park Road. The firehouse is located on Wilson Hill Road, across from the municipal

building, and a substation is located on Milford Road near its intersection with Silver Lake Road.

Issues of concern relating to emergency services include:



Volunteer Fire Company

- The provision of emergency services is inhibited by the large size of the township, its dispersed development pattern, lack of road connections and, in some communities, poor road conditions. These factors contribute to increased response times and increased difficulty in reaching incident locations. A shortage of volunteers to staff the fire department also poses a problem.
- The township is experiencing difficulties recruiting volunteer firefighters.
- Health care facilities are a far distance from the township. The nearest hospital is approximately 45 minutes away. Hospitals serving the area are in Port Jervis NY, Newton NJ, and Honesdale, PA.

### ***Water Supply***

Delaware Township relies on groundwater supplies for all of its domestic (drinking) water needs. There are two community (public) water supply systems serving the communities known as Wild Acres and Marcel Lakes Estates; these are owned and operated by Pennsylvania-American Water Company (PAWC), which has a lengthy record of providing public water service throughout Pennsylvania. Several other homeowners association owned community water systems exist serving their respective subdivisions. The balance of Delaware Township residents is served by privately owned, individual on-lot wells.

To date there have been no reports of problems involving insufficient water supply. However, there are concerns with possible contamination of water supplies, as many existing drilled wells are shallow—less than ten feet—drawing from unconfined aquifers susceptible to contamination from stormwater runoff and leaking septic systems.

### ***Wastewater Disposal***

There are three community wastewater collection, treatment and disposal systems in Delaware Township. These serve Camp Speer/Eljabar, Marcel Lake Estates and Sections 19 through 21 of Wild Acres. The wastewater treatment facilities serving Camp Speer/Eljabar and Marcel Lake Estates have stream discharges; that serving Wild Acres discharges to a community sand mound. There are approximately 23 community on-lot disposal systems in service in the Township. The balance of Delaware Township is served by individual on-lot disposal systems:

- The privately-owned, community wastewater system serving Camp Speer/Eljabar is an Imhoff Tank process with sand filtration and disinfection and stream discharge to an unnamed tributary to Dingmans Creek above Nyce Lake. Its capacity is 4,000 gallons per day. It operates approximately eight weeks per year during YMCA camp functions. It has reportedly violated its discharge limitations in past years.

- The community wastewater system serving Marcel Lake Estates is a privately-owned, sequential batch reactor process with ultraviolet disinfection and stream discharge to Dingmans Creek downstream of Marcel Lake. Its capacity is 205,000 gallons per day. It has reportedly violated its permit limitations on a regular basis. Its collection system reportedly experiences high rates of excessive flow from inflow and infiltration. Its current NPDES permit reportedly limits future connections because of this excessive flow.
- The privately-owned community wastewater system serving section 19 through 21 of Wild Acres is a Rotating Biological Contactor (RBC) process, preceded by primary clarification, followed by final clarification, filtration and chlorine disinfection. The treated effluent is discharged into a community sand mound, which limits the overall capacity of the facility to the flow from 38 homes, or approximately 9,500 gallons per day. There have been reports that the filter and disinfection system have been out of service.

### ***Stormwater Management***

Stormwater runoff is identified as a problem in many of the township's residential neighborhoods. This is due in large part to development on small lots lacking stormwater management systems, roads without adequate stormwater conveyance and infiltration systems, and the general topography of the area. Without proper management, runoff, flows through or accumulates on residential lots causing flooding and damage, rather than infiltrating into the ground. In addition, runoff that flows across the land carries contaminants that adversely impact water quality. These problems are exacerbated by increased amounts of impervious cover (typically pavement and buildings).

### ***Energy Supply***

Electrical service is provided by Metropolitan Edison. The infrastructure is in need of upgrade.

- Brownouts and blackouts are common.

## **PLANNING IMPLICATIONS**

### ***Summary***

Public facilities located at the municipal complex on Wilson Hill Road appear to be regularly used and sufficiently serve township residents. However, as the township's population grows facilities may need to be expanded and perhaps relocated in order to continue adequate service and maximize accessibility by residents. Demographic trends indicate that more families with young children are moving into the township. In addition, the township has a relatively large number of seniors and the potential for continued growth in this segment of the population as the baby boomer generation approaches retirement. The township must remain aware of these trends and the possibility that there may be a need to provide facilities for both youths and seniors.

The township's emergency service volunteers are to be commended for performing an important service. Despite their efforts, difficulties encountered by emergency crews, primarily caused by lack of access to residences, increase risks to residents. This is typical of a rural community, but enhancements can be made to improve services.

Establishing road connections is one way to alleviate access problems. Concentrating future development along major roads is another. However, sufficient water supply is needed for firefighting operations.

In reference to water supply and wastewater treatment, the township faces a major challenge. While the available supply of water does not appear to be a problem, threats to water quality are a concern. These threats stem from stormwater runoff and inadequate sewage disposal systems. The township recognizes that lawful activities such as extraction of minerals impact water supply sources and such activities are governed by statutes regulating mineral extraction that specify replacement and restoration of water supplies affected by such activities. It also recognizes that commercial agriculture production impacts water supply sources.

There are several homeowners association owned community water systems; the condition and regulatory compliance history of these systems is not known. The township must provide security for long-term, satisfactory operation and maintenance of community water supply systems. A wellhead protection ordinance for community wells over 10,000 GPD is currently in the process of being approved.

An Act 537 Plan update was prepared by the Township Engineer and submitted as a draft dated September 2005. To date it has not been adopted by the Township. It contains references to investigations that were made in the mid-1990s. The draft plan notes that the majority of soils in Delaware Township have severe limitation for wastewater disposal. While most of the soils underlying the Township pose severe limitations to wastewater disposal, there are acceptable alternatives for on-lot and community wastewater disposal, such as on-lot and community sand mounds, and spray and drip irrigation.

The draft plan identifies several areas of concern for inadequate sewage disposal facilities, caused by factors such as: small lot sizes creating insufficient isolation distance; undersized septic tanks and/or absorption fields; lots with soils severely limited for use with septic drain fields; lots with no replacement areas; lots with excessive slopes; and lots with failing on-lot disposal systems. The areas of concern identified include Birchwood Lakes, Highland Acres, Lake Kemadobi and Tri-Angle Farms, (Old) Marcel Lakes and a portion of Pocono Mountain Lake Forest, and Wild Acres. It identifies and evaluates alternatives for addressing these wastewater disposal improvements needs, while providing four (4) alternatives and estimates of the costs of the alternative improvements for the Wild Acres Sections 19 thru 22. For Wild Acres, the cost per dwelling unit for the improvements ranges from \$2,300 to \$12,600. It would appear that a feasible alternative could be implemented at least for the Wild Acres Sections 19 thru 22.

The draft 537 Plan recommends adopting revisions to a Sanitary Ordinance that would essentially serve as a Sewage Management Program containing a variety of policies. (The township is currently working on a septic management program whereby septic tanks will be pumped every five years). Consideration should be given to finalizing the 537 Plan update, adopting and implementing the plan recommendations.

Build-out of several existing subdivisions within the Township is limited by many of the factors identified above: small lot sizes; soils severely limited for use as septic drain fields; excessive slopes; and inadequate central sewers. For build-out of these communities to occur, centralized wastewater systems or improvements to the existing facilities will need to be implemented. Some of these subdivisions are referenced in the draft 537 Plan as the “areas of concern” listed above.

The Future Land Use Plan proposes a Town Center surrounded by a Moderate Density Residential (MDR) area. Assuming the Town Center were built out as a strictly residential development, it would require a water supply of approximately 141,000 GPD (based on 250 GPD/EDU) and would generate an equivalent amount of wastewater (It is more likely that the Town Center would contain a mix of uses, which would alter this estimate). New residential development resulting from the proposed MDR area in the vicinity of the Town Center would require approximately 310,000 GPD of water and generate the same amount of wastewater. This is in addition to existing residential development. Community systems or a municipal or regional authority would be necessary and is the preferred method for serving higher intensity development areas such as those proposed.

## FUTURE PLANNING POLICIES & RECOMMENDATIONS

### **Overview**

Future planning and policy recommendations pertaining to community facilities and utilities address municipal facilities, water supply, and improvements to emergency services, existing sewage treatment and disposal systems, and energy supply (Map A-6).

### **Recommendations**

Policies and recommendations are as follows:

- Maintain operation of the facilities at the existing municipal complex on Wilson Hill Road. Retain this property in the future, but consider relocating the municipal offices and library to the proposed Town Center to be in proximity to the population center and infrastructure.
- Establish road connections and upgrade roads where feasible, in order to improve emergency access (see Transportation Plan).
- Work with the fire company to create a volunteer recruitment program. Hold public events sponsored by the fire company to foster relationships between community members and the fire company. Consider a media/marketing campaign for volunteer recruitment.
- Consider future relocation of the fire house to the vicinity of the proposed Town Center to be in proximity to the township’s population center, while retaining the existing fire house on Wilson Hill Road as a substation.
- Evaluate the optimal location for ambulance facilities.
- Promote the establishment of medical services in the township capable of treating minor injuries and health issues.

- To protect the township's surface and groundwater supply:
  - o Protect the township's Exceptional Value and High Quality watersheds by prohibiting development of environmentally constrained land, such as wetlands, stream banks, very steep slopes, and hydric and SHWT soils.
  - o Protect forest and vegetative cover, especially in headwater drainage areas.
  - o Provide wellhead protection buffer zones surrounding community drinking water wells. Land use within designated zones is regulated in an effort to reduce potential infiltration of surface pollution into groundwater.
  - o Manage stormwater runoff and wastewater disposal.
- To manage stormwater runoff:
  - o Prepare comprehensive watershed planning and stormwater management plans in partnership with the county and neighboring townships.
  - o Require stormwater management systems that employ Best Management Practices, such as vegetated swales, wetlands, and ponds, in all new residential subdivisions and land developments.
  - o Limit the use of impervious cover; promote the use of pervious surfaces that allow infiltration of stormwater.
  - o Utilize Open Space Development to reduce the volume of stormwater runoff generated by new residential development.
  - o Require that net post-development conditions are consistent with the natural conditions of the receiving stream, or achieve "open meadow condition" in order to reduce peak runoff rates and protect stream channels.
  - o Require removal of pollutants from stormwater runoff prior to release in order to protect water quality.
  - o Minimize runoff from developed sites into adjacent lands.
  - o Require regular maintenance of stormwater management facilities.
- To manage wastewater treatment and disposal:
  - o Prepare and enforce a management plan for on-lot septic systems (this is currently underway).
  - o Future sewage facilities planning should comply with DEP's *Water Quality Antidegradation Guidance*, which requires that

land-based sewage disposal alternatives should be examined first for new sewage disposal concepts.

- o Utilize alternative systems to the extent possible, such as on-lot and community sand mounds, and spray and drip irrigation.
- o Increase residential lot sizes to provide sufficient isolation distance for on-lot systems, replacement areas, and sufficiently sized septic tanks and/or absorption fields.
- o Limit development of lots with steep slopes.
- Coordinate necessary upgrades with the electric companies.

## IMPLEMENTATION STRATEGIES

### ***Overview***

Implementation of the community facilities plan focuses on actions that will allow efficient delivery of municipal and emergency services and protect and improve water, sewage disposal and energy systems. This can be accomplished through the following initiatives:

### ***Zoning Ordinance***

Zoning ordinance amendments intended to implement the policies and recommendations are as follows:

- Permit municipal and civic uses in the proposed Town Center District to accommodate the possible relocation of the township building, library, and firehouse.
- Permit medical office as a use in the C-Commercial District.
- Strengthen the natural resource protection standards in order to enhance water supply and water quality (see Natural Resource Protection Plan)
- Include a wellhead protection ordinance.
- Amend the lot size provisions to require larger lot sizes for subdivisions without open space capable of safely accommodating on-lot septic systems.
- Promote community septic systems in Open Space Developments.
- Strengthen the steep slope provisions and include building codes for construction on steep slopes (see Natural Resource Protection Plan)

### ***SLDO***

Subdivision and Land Development Ordinance amendments intended to implement the policies and recommendations are as follows:

- Amend the tree protection and removal standards (see Natural Resource Protection Plan)

***Additional Measures***

Additional measures intended to implement the policies and recommendations are as follows:

- Implement road improvements to facilitate emergency access (see Transportation Plan)
- Investigate volunteer firefighter and EMS recruitment programs and assistance offered by organizations such as the National Volunteer Fire Council and VolunteerFD.
- Create and adopt a Stormwater Management Ordinance (see Natural Resource Protection Plan) that includes Best Management Practices.
- Partner with the county and neighboring municipalities to prepare comprehensive a watershed and stormwater management plan.
- Provide outreach and education to property owners on methods for conveying stormwater (e.g. a vegetated swale) to minimize flooding and damage to their own and adjacent properties. Where necessary, obtain easements from the property owner to construct a conveyance channel.
- Update and adopt the Act 537 Plan including provisions for inspection and maintenance of existing community and on-lot septic systems, as well as accommodations for future development as proposed by the Future Land Use Plan. Include provisions for alternative systems such as on-lot and community sand mounds, and spray and drip irrigation.
- Work with the County and neighboring municipalities to determine the feasibility of a regional wastewater treatment system.
- Establish on-going communications with energy providers.