

The 2017 Update to the Comprehensive Plan

Lower Swatara Township,
Dauphin County, Pennsylvania

Adopted August 16, 2017

Prepared with assistance from



Gannett Fleming

HRG

Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

RESOLUTION NO. 2017-R-16

**A RESOLUTION OF BOARD OF COMMISSIONERS OF LOWER SWATARA TOWNSHIP,
DAUPHIN COUNTY, PENNSYLVANIA
APPROVING THE ADOPTION OF
THE 2017 UPDATE TO THE LOWER SWATARA TOWNSHIP COMPREHENSIVE PLAN.**

WHEREAS, the Board of Commissioners of Lower Swatara Township have maintained a comprehensive plan as guide to future development, land use, and community character decisions; and

WHEREAS, Section 301.4 of the Pennsylvania Municipalities Planning Code (Act of 1968, P.L. 805, No. 247, as reenacted and amended) requires that municipal plans be generally consistent with the adopted county comprehensive plan; and

WHEREAS, the Lower Swatara Township Planning Commission (the Planning Commission) serves as the official planning agency for Lower Swatara Township; and

WHEREAS, the Board of Commissioners directed the Planning Commission to oversee the preparation of the Comprehensive Plan, including opportunities for citizen participation through a comprehensive plan steering committee, interviews and community meeting; and

WHEREAS, the socioeconomic and housing data, transportation and land use patterns, cultural and environmental resources, and community facilities and services were analyzed to identify trends, needs and concerns in Lower Swatara Township; and

WHEREAS, the Planning Commission has conducted a public meeting pursuant to Section 302 of the Pennsylvania Municipalities Planning Code as amended, and has taken the comments of these entities into consideration in preparing the Comprehensive Plan; and

WHEREAS, the Planning Commission approved distribution of the draft Comprehensive Plan to adjacent municipalities, the Middletown Area School District, and the Dauphin County Planning Commission for review and comment, and has taken the comments of these entities into consideration in preparing the Comprehensive Plan;

NOW, THEREFORE, BE IT RESOLVED by the Board of Commissioners of Lower Swatara Township, a Township of the first class under the laws of the Commonwealth of Pennsylvania, AND IT IS HEREBY RESOLVED:

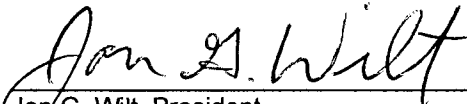
1. That the Board of Commissioners of Lower Swatara Township recognizes the Lower Swatara Township Planning Commission as the official planning commission for the Township and that such agency promotes public interest in, and understanding of, the Lower Swatara Township Comprehensive Plan and the planning profession; and
2. That the Plan submitted by the Planning Commission with the exception of the recommendation to rezone the property on the Southeast quadrant of the North Union Street interchange with PA Route 283 to commercial from residential is hereby adopted by the Board of Commissioners of Lower Swatara Township as the official Comprehensive Plan of Lower Swatara Township, rescinding the Comprehensive Plan adopted in 2004.
3. That the Board of Commissioners of Lower Swatara Township will consider the community development goals and objectives presented in the Plan when dealing with planning issues requiring action by the Board; and

4. That the Board of Commissioners of Lower Swatara Township strongly urges all Boards, Commissions, and Committees of Lower Swatara Township, as well as county and state agencies to review and consider the Comprehensive Plan in their planning and decision-making processes; and
5. The Township Manager shall distribute copies of this Resolution to the proper staff, Authorities and Boards in the Township whose further action is necessary to achieve the purpose of this Resolution.
6. The Township Manager shall ensure that one copy of the adopted Comprehensive Plan is distributed to the Dauphin County Planning Commission.

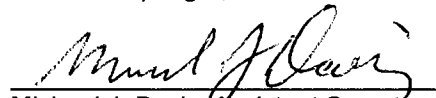
ADOPTED THIS 16th DAY OF AUGUST, 2017.


BOARD OF COMMISSIONERS OF LOWER SWATARA
TOWNSHIP

(SEAL)


Jon G. Wilt, President



Laddie J. Springer, Vice- President


Michael J. Davis, Assistant Secretary


Todd F. Truntz, Commissioner


Benjamin C. Hall, Commissioner

ATTEST:


Jean R. Arroyo, Secretary

Lower Swatara Township Comprehensive Plan

The 2017 Update to the 2004 Township Comprehensive Plan

Adopted August 16, 2017

Preparation of this comprehensive plan was funded by the Lower Swatara Township Board of Commissioners and the Tri-County Regional Planning Commission's Regional Connections Grant Program.

Our Vision

In 2025,
Lower Swatara Township will be a community that...

Offers housing choices in type, size, lot size, and neighborhood character.

Values businesses and institutions as employers, resident recruiters, and community partners.

Has new retail and industry that provides employment opportunities, serves residents and attracts visitors and new residents, and improves the Township and school district tax base.

Has proactive and responsive public safety services.

Has new parks and expanded recreational facilities and activities.

Manages water use, including stormwater, to minimize water pollution.

Restores floodprone areas to open space, where feasible.

Manages, maintains, and improves its transportation network and infrastructure for modern use.

Works actively and cooperatively with the Middletown Area School District with regard to community development, recreation opportunities, and commitment to meeting the educational, social and health needs of students and families.

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Board of Commissioners

Thomas L. Mehaffie III, President
 Jon G. Wilt, Vice President
 Michael J. Davies
 Todd F. Truntz
 Laddie J. Springer

Planning Commission

Chauncey D. Knopp, Planning Commission
 Eric Breon, Planning Commission
 Paul Wagner, Planning Commission
 Kimber L. Latsha, Planning Commission
 Christopher DeHart, Planning Commission, Fire Chief

Steering Committee

Chauncey D. Knopp, Planning Commission	Dan Magaro, Resident
Eric Breon, Planning Commission	Jonathan Strite, Strites Orchard
Paul Wagner, Planning Commission	Lori Yeich, Resident
Kimber L. Latsha, Planning Commission	Tom Eddinger, Dauphin County Planning Commission and Tri-County Regional Planning Commission
Christopher DeHart, Planning Commission, Fire Chief	Leah Eppinger, former Dauphin County Planning Commission and Tri-County Regional Planning Commission
Steve Artman, Resident	
Ron Burkholder, Developer of Old Reliance	
Kathy Gutshall, Resident	
Jim Kazakavage, Former Recreation Board	

Township Staff

Anne Shambaugh, Manager
 Robert Greene, Planning and Zoning Director
 Daniel Wagner, Public Works Director

Consultants

Gannett Fleming, Inc.
 HRG, Inc.

Plan Purpose and Preparation

The Purpose of the Comprehensive Plan

A comprehensive plan is a policy guide for the ongoing development of a municipality in Pennsylvania. The comprehensive plan establishes a foundation for land use and development regulations and a framework for municipal decisions regarding infrastructure and community services. Its purpose is to ensure that municipal decisions regarding community and economic growth are coordinated with the land use plan and with one another.

As a policy document, an adopted comprehensive plan is a guide and reference for officials as they make decisions and approvals. The plan itself does not add, change, or remove municipal regulations, standards, or procedures. Its approval recommends that such action be taken in the future. A comprehensive plan is implemented through ordinance adoption or amendment, budget, and other approvals.

The comprehensive plan establishes a foundation for land use and development regulations and a framework for municipal decisions regarding infrastructure and community services.

Authority and Tools for Municipal Planning

The Pennsylvania Municipalities Planning Code (MPC), Act 247 of 1968, as reenacted and amended, authorizes municipalities to plan for the future using a variety of planning tools. These tools include the municipal planning commission, the comprehensive plan, the official map, the subdivision and land development ordinance, the capital improvement program, the zoning ordinance, and the zoning hearing board. Comprehensive plans are required for counties and are voluntary for boroughs and townships.

The MPC requires that a comprehensive plan consider the many factors that influence a community's development: existing development and infrastructure; anticipated changes in population, housing, and economic development; and associated changes in demand for services. Comprehensive plans are to examine community and economic growth trends, project future change, and recommend a future land use pattern, new or revised development regulations, transportation and infrastructure investments, and community service improvements that accommodate those projections. In addition, the comprehensive plan should include strategies to implement or carry out the plan through the use of applicable planning tools.

The MPC acknowledges that comprehensive planning is an ongoing process—one that needs periodic review and update to address continuing issues in the most effective ways and to address new issues that arise over time. The municipal planning agency—in this case, the Lower Swatara Township Planning Commission—is required to review and, as appropriate, renew or update its comprehensive plan at least every 10 years (Article III,

Section 301(c)). The 2016 Comprehensive Plan is an update of the Township's 2004 Comprehensive Plan.

Plan Preparation

The 2016 Comprehensive Plan was prepared through discussions with an appointed Steering Committee, interviews with Township officials and staff, and citizen input. The Steering Committee was charged

- to convey the perspectives of local residents and constituent groups in planning discussions, and
- to maximize public participation by extending the planning effort to others, e.g., sharing discussion points, promoting the webpage for citizen input, and inviting people to public events.

A social media webpage, <https://LowerSwatara.mysidewalk.com/>, was available for citizens to suggest issues and opportunities that the Township's 2016 Comprehensive Plan should address. Paper copies of the webpage's prompting questions were also available.

As required by the MPC, the Planning Commission advertised and held a public meeting to receive comments on the draft comprehensive plan on August 25, 2016. Additional comments were heard at the September 22, 2016 Planning Commission meeting prior to the Planning Commission's acceptance of the draft plan with the following specified revisions:

1. Recommend rezoning of the Williams Farm along the north side of Fulling Mill Road and the adjacent residentially zoned parcels along the west side of Longview Drive to neighborhood commercial at a depth consistent with the existing neighborhood commercial district on the east side of Nissley Drive and Hollywood Drive; add to Future Land Use map.
2. Recommend rezoning of the Williams parcel along the south side of Fulling Mill Road between Lumber Street and the existing Light Industrial Park district; add to Future Land Use map.
3. Specify the extension of Spring Garden Drive eastward from PA 441 to North Union Street as a recommendation.
4. Specify improvement of the township-owned portion of North Union Street as a recommendation.

Upon acceptance of the draft plan by the Planning Commission, the draft plan was distributed to Dauphin County, the Middletown Area School District, and adjacent municipalities, and made available in the Township office for the required 45-day review period. On March 1, 2017, the Board of Commissioners held a public hearing to receive final comments on the draft plan. On August 16, 2017, the Board adopted the plan by approval of Resolution 2017-R-16.

Population and Household Trends

Lower Swatara Township had a resident population of 8,268 in 2010, reflecting a steady rise since 1980. The Tri-County Regional Planning Commission projects a continued population increase for the Township through 2040, to approximately 9,450 residents.

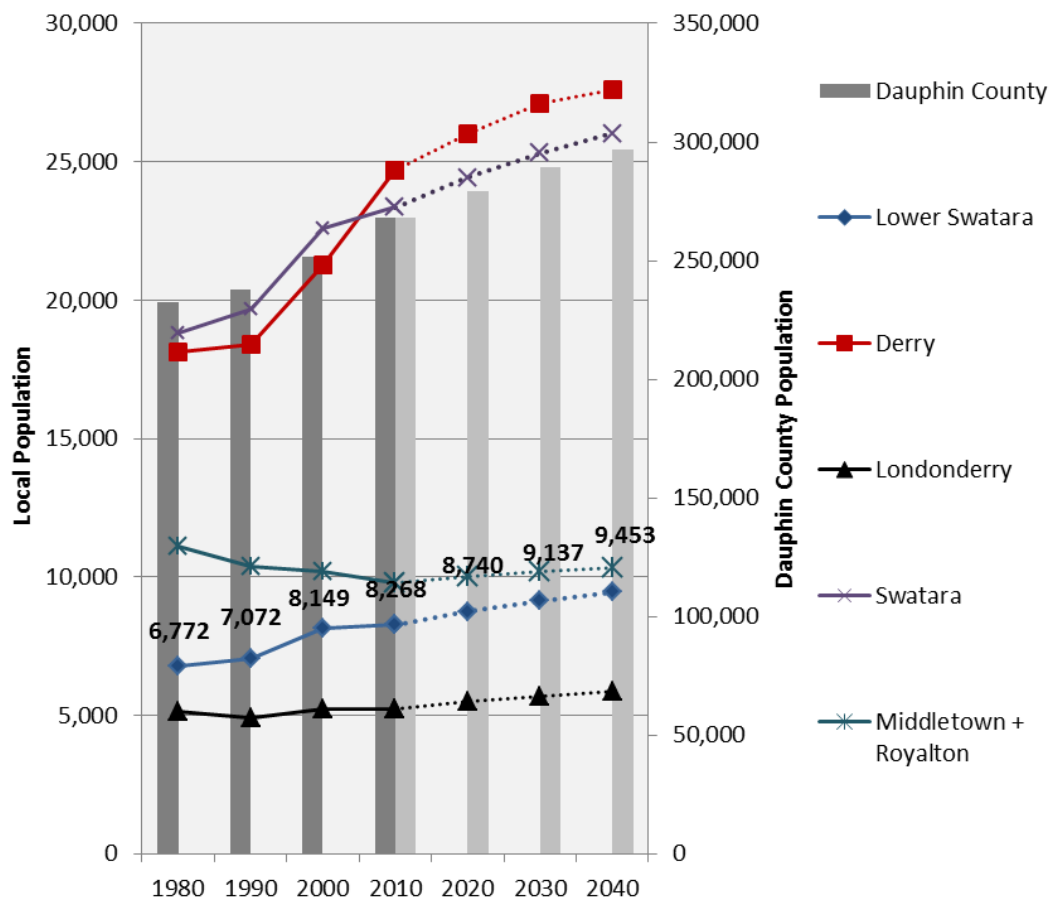
Derry Township, Londonderry Township, and Swatara Township also grew from 1980 to 2010. All three are projected to grow through 2040 with Derry and Swatara Townships growing slightly faster than Lower Swatara and Londonderry Townships.

Middletown and Royalton Boroughs have lost population since 1980. Tri-County projects that this trend will turn by 2020 and the Boroughs will begin to recover.

Overall, Dauphin County experienced a population increase from 1980 to 2010, which is projected to continue.

Lower Swatara Township is projected to continue its steady growth to a population of approximately 9,450 by 2040.

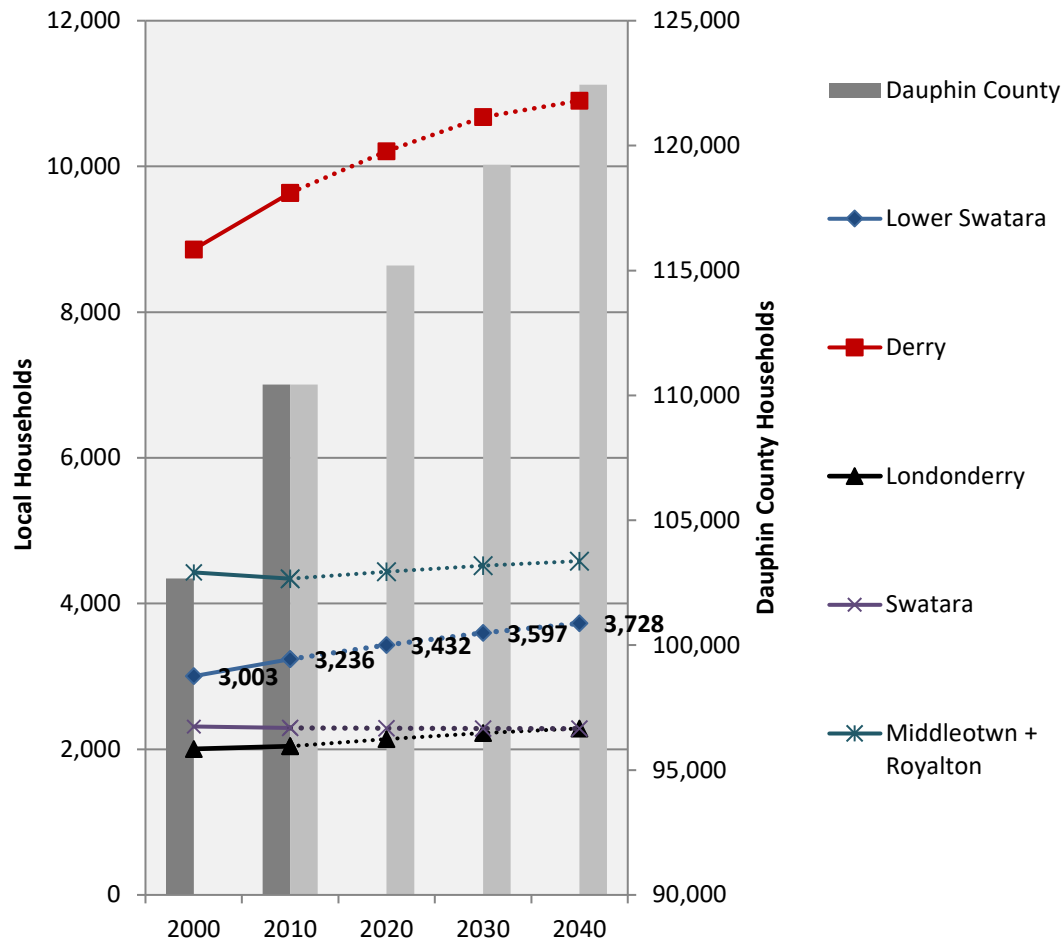
Figure 2-1 Population Change, 1980-2010, and Projections, 2020-2040



Source: 2040 Regional Transportation Plan, HATS/Tri-County Regional Planning Commission

There were 3,236 households in Lower Swatara in 2010. As a result of population growth and household trends, the Tri-County Regional Planning Commission projects an increase to approximately 3,278 households through 2040.

Figure 2-2 Household Change, 1980-2010, and Projections, 2020-2040



Source: 2040 Regional Transportation Plan, HATS/Tri-County Regional Planning Commission

Race and Ethnicity

In 2010, 90 percent of Lower Swatara's residents were white, although the population of two minority race groups, namely African-Americans and residents of two or more races, each increased by 150 or more people since 2000. Over the same time period, the Hispanic population more than doubled to 300 residents (4 percent of the total population) from 2000 to 2010.

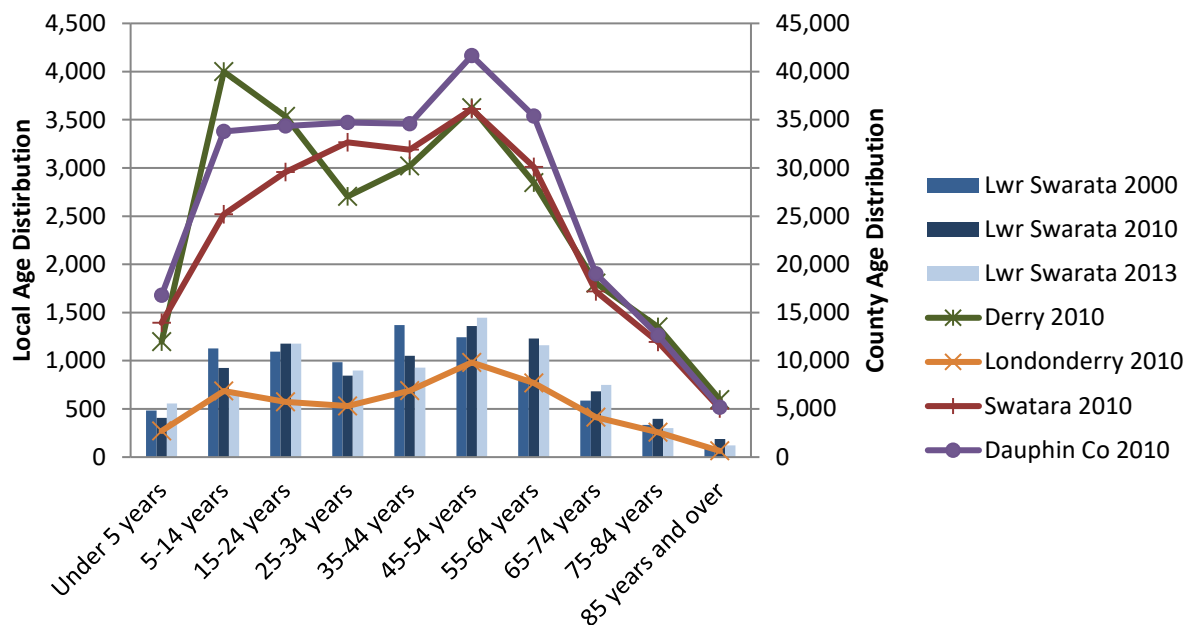
Age Distribution

In 2010, Lower Swatara's largest age groups were the 45-54 year group, the 55-64 year group, and the 15-24 year group. The youngest and oldest age groups--under 5 years old and 85 years and older--are represented by the fewest residents.

All older adult and senior age groups increased in number from 2000 to 2010, contributing to a rising median age from 38.2 years to 42.7 years. All younger age groups declined, except the 15-24 year age groups, which is likely due to growth in student enrollment at Penn State-Harrisburg.

With a fewer young people in the community, the Lower Swatara's median age increased to 42.7 years in 2010 and exceeded the County's median age, 39.1 years.

Figure 2-3 Age Distribution, 2010 and 2013



Source: U.S. Census Bureau

Educational Attainment

Educational levels of residents 25 years and older in Lower Swatara are similar to county-wide levels, with 28 percent holding a bachelor's degree and 9.2 percent holding a master's, doctorate, or other professional degree.

Households, Household Size, and Composition

In 2010 there were 3,236 households, of which 59.9% were married couples, 9.5% were single female householders, 3.5% were single male householders—all with children—and 27.2% were nonfamily households (unrelated individuals living together). Nearly 1 in 4 nonfamily households were single householders living alone, and 1 in 12 were single

seniors (65 years of age or older). The average household size was 2.41 people and the average family size was 2.85 people.

Household Income

In 2010, Lower Swatara's median household income was \$67,321, and the median income for a family was \$77,776. Both figures were lower for Dauphin County as a whole—\$52,371 and \$66,023, respectively. After accounting for inflation, Lower Swatara's median household income gained nearly three percent in real value since 2000 but median family income showed no real gain.

Lower Swatara's households gained nearly three percent in income value from 2000 to 2010 but family income had no real gain.

About 4.1% of families and 4.2% of the total population were living below the poverty line in 2010, including 4.4% of those under age 18 and 2.6% of those age 65 or older. In Dauphin County, 11.9% of the population was below the poverty line. Likewise, other county poverty rates were higher.

Housing and Neighborhoods

As of the 2010 U.S. Census, there were 3,250 housing units in Lower Swatara at an average density of 220 units per square mile, or three units per acre. Of the occupied units, 87.4% of the housing units were owner-occupied; 12.6% were renter-occupied. Only 4.5% of all units were vacant. Figures were vastly different from Dauphin County, where the renter market was stronger at 35.3 percent, and vacant units (including seasonal) were at 8.3 percent.

According to the 2010 American Community Survey (ACS) estimates, 82.8% of housing units in the Township were single units (detached or duplexed), 2.8% were in two- to four-unit structures, 1.3% were in five-unit or larger structures, and 13.0% were mobile homes. Regarding the age of housing units, 46.1% were built since 1980, 48.1% were built between 1940 and 1979, and 5.8% were built in 1939 or earlier.

Figure 2-4 Homes along James Street



The median price of a house in Lower Swatara in 2010 was \$144,400; Dauphin County's median home value was \$153,100.

Neighborhoods

The earliest homes in Lower Swatara were farmsteads scattered across the rolling countryside. In the early to mid-1900s as the population grew and personal automobiles became common, individual lots were subdivided from farms and homes were built along streets extending from outside of Middletown and Highspire and along the rural state

highways; North Union Street, Lumber Street, Rosedale Avenue, Oberlin Road and Longview Drive are examples. In the 1950s, residential development patterns changed to create multiple lots for new homes, typically less than 10. Mobile homes were a relatively quick housing solution after Hurricane Agnes displaced area residents in June 1972 and became a permanent as the mobile home parks at Lisa Lake and Little Hollywood. Since then, large scale subdivision and land development has been the predominant means of residential construction, building multiple homes in a planned fashion as a neighborhood. Today, many of these neighborhoods are known simply by their development project names, such as Old Reliance, Twelve Oaks, Georgetown, and Woodridge.

Economy

Major employers in Lower Swatara include FedEx and its affiliates, Tyco Electronics, Phoenix Contact, numerous commercial and industrial entities concentrated along Fulling Mill Road, the Pennsylvania Turnpike Commission, the Harrisburg International Airport, the Penn State Harrisburg and the Middletown Area School District.

According to the 2012 Economic Census, Lower Swatara had 205 business establishments within its borders.¹ These businesses

employed approximately 5,500 workers. The three industries with the most businesses were transportation and warehousing (34), wholesale trade (20), and retail trade (19). Together they employed 2,348 workers, or about 43 percent of all workers. Government employer data was not fully reported.

From the Longitudinal Employer-Household Dynamics (LEHD) program at the Center for Economic Studies, also at

Figure 2-5 Market Street Extension



Figure 2-6 1400 AIP Drive in the Industrial Park



¹ The Economic Census does not generally include government-owned establishments, even when their primary activity would be classified in industries covered by the Economic Census. Because of these exclusions, economic census data for industries in many sectors might appear to be incomplete.

the U.S. Census Bureau, jobs in 2012 were counted as 8,518; public administration (includes the Pennsylvania Turnpike Commission), transportation and warehousing, and manufacturing ranked as the top three industries of employment.

The 3,605 Lower Swatara residents who were employed in 2012, regardless of job location, were most commonly employed in health care and social assistance (465), public administration (371), retail trade (358), and manufacturing (310), followed by accommodation and food services (263) and finance and insurance (257). The majority commuted to outside locations for work; only 10.3% worked within the Township.

With 8,518 jobs in the Township in 2012, more than twice as many workers commuted into the Township (8,145) as commuted out of (3,232) to reach their employment destination. This puts significant pressure on the transportation system.

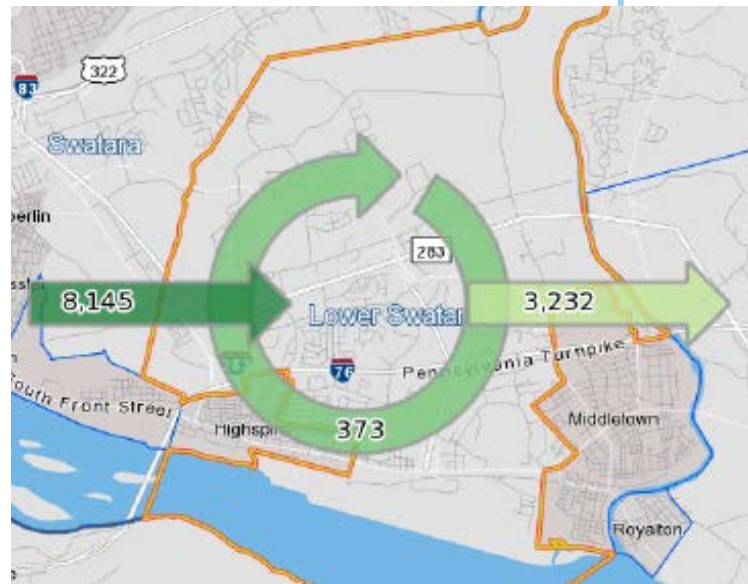
That same year, less than three percent of working residents worked at home, requiring no travel commute to work. Among those traveling, 86.0% drove alone, 5.5% carpooled, 4.9% walked, 0.4% took public transit, and 0.3% took a cab, motorcycle, or other means.

Unemployment rates fell from 2.7 percent in 2010 to 1.8 percent in 2014.

Land Use

In 2014, 40 percent of lands in Lower Swatara Township had been developed for intensive uses, namely residential, commercial, industrial, and institutional uses, or were actively under construction. Quarrying was active in two percent of the Township, and agricultural activities were evident on 20 percent. Open space, such as parks, lawns, and landscapes, as well as natural areas, including river islands,

Figure 2-7 Worker Flows into and out of Lower Swatara



Source: U.S. Census Bureau, 2012 Economic Census.

Figure 2-8 Workers Harvesting Strawberries at Strites



Source: Strites Orchard and Farm Market

occupied the remaining 38 percent. Land use/land cover classifications made by the Tri-County Regional Planning Commission in 2008 and 2014 reflected real changes in uses, such as development of new homes, changes in use, and changes in ownership and use, as well as a refined delineation of open space within developed sites.

Southern portions of the Township along the PA Route 230 corridor have experienced redevelopment. Lands where the Harrisburg International Airport and Penn State Harrisburg are located were first developed by the military in the late 1800s and renamed the Olmsted Air Force Base after World War II. Decommissioning of the air force base made administrative buildings and residence facilities available to the state for re-use as a branch campus of Penn State University in the Harrisburg area, established in 1966. The air field was developed into a commercial airport to offer passenger aviation and air freight services, commencing in 1969. Both the university and the airport have redeveloped various sites within their campuses in efforts to modernize facilities and meet market needs. Other properties, such as the Capitol Logistics Center and the school district, have been redeveloped with modern facilities for continued use. Central and northern portions of the Township have typically experienced only a single wave of development for residential, commercial, or industrial uses.

Education

The Middletown Area School District serves Lower Swatara Township, Middletown Borough, and Royalton Borough. Enrollment in Fall 2015 was 2,427 students. The racial and ethnic composition of students is much more diverse than that of the Township. Districtwide, families are economically challenged, with 51.3 percent qualifying for free or reduced lunch in Fall 2015.

The school district operates three elementary schools (grades K-5), one middle school (grades 6-8), and one high school (grades 9-12). The Lyall J. Fink Elementary School is located in Middletown and was renovated in 2007-08. The John C. Kunkel Elementary School is located on Fulling Mill Road. The Robert G. Reid Elementary School, the Middle School, and the High School South are located on a connected campus. Reid Elementary was completed in 2002. The Middle School was completed in 2007. The District is currently constructing a new high school, which will open for the 2016-2017 school year.

All students living in Lower Swatara are bussed to school.

Figure 2-9 Middletown Area High School



Private Catholic education for prekindergarten through grade 8 is available at the Seven Sorrows of the Blessed Virgin Mary School on East Water Street, Middletown.

The nearest public library is the Middletown Public Library on North Catherine Street in Middletown. The William H. & Marion C. Alexander Family Library in Hummelstown is the nearest branch of the Dauphin County Library System.

Penn State Harrisburg is an undergraduate college and school of the Penn State University. It offers more than 65 associate, bachelor's, master's, and doctoral degree programs. The student body of more than 4,400 students is increasingly diverse in race, ethnicity, and origin. Campus alumni now total more than 35,000—a significant network of professionals with connections to the Middletown area.

The Penn State Harrisburg campus spans the Lower Swatara-Middletown border on lands once part of the Olmsted Air Force Base. The campus hosts facilities for academic instruction, residence halls, student affairs and student life services, and athletics. Off-campus student housing is available adjacent to the campus and within a 20-minute walk.

The campus is patrolled by the Department of Safety and Police Services to enforce state laws and University rules and regulations.

Penn State Harrisburg is one of the hubs of the Harrisburg Market Keystone Innovation Zone, making certain business ventures eligible for tax incentives.

Figure 2-10 Penn State Harrisburg



Health Care

Residents of the Township have close access to two health systems. The Penn State Hershey Health System is based in Derry Township. PinnacleHealth is based in Harrisburg. Both offer hospitals and other medical facilities within minutes of Lower Swatara. However, there is no medical or urgent care clinic in the Middletown area.

Indicators of public health and access to health care are found in the Community Health Needs Assessment jointly conducted by PinnacleHealth, Penn State Hershey Health, and Holy Spirit Health systems. Findings included:

- Rates of childhood obesity in Dauphin County are higher than the rest of the state.
- Rates of heart disease in Dauphin County are higher than statewide rates, but cancer rates are lower.

Childhood obesity and heart disease are prevalent in Dauphin County. Also, regular access to a primary care doctor and medical services for seniors are limited.

- More than one out of every five individuals in the region does not have a doctor.
- The top two services that individuals report having the most difficulty finding were services for individuals with HIV/AIDS and services for individuals over the age of 60.

Public Safety

Crime statistics compiled and reported by Neighborhoodscout.com indicate that the Middletown area experienced 16 violent crimes (rape, aggravated assault) and 117 property crimes (motor vehicle theft, arson, larceny, and burglary) in 2014 for a total of 133 federally reported crimes or 15 crimes per 1,000 residents. Crime rates for 2015 will be released in Fall 2016.

When compared to other suburban areas in the region—some with educational institutions, the Middletown area had more violent crimes per 1,000 residents and fewer property crimes per 1,000 residents.

Table 2-1 Community Crime

Urban Area or Town	Violent Crimes per 1,000 residents	Property Crimes per 1,000 residents	Crime Index (100 is safest)
Middletown	1.80	13.19	53
Harrisburg	11.23	38.43	7
Hershey	1.04	20.52	35
Hummelstown	2.42	11.64	n/a
Enola	0.47	9.69	72
Camp Hill	0.25	7.98	81
Mechanicsburg	0.78	18.06	41
New Cumberland	1.10	14.17	53
Etters	1.41	17.67	41
Elizabethtown	1.12	14.47	51
Pennsylvania	3.14	19.52	n/a

Source: Neighborhoodscout.com

The most common natural hazard causing the greatest risk in Lower Swatara is flooding from heavy rain events. Additional common hazards are steep slopes with poor cut slope stability, areas subject to sinkhole development, and woodland subject to wildfires. Lower Swatara has a low risk of earthquakes, a moderate risk of hurricanes, and high risk of hail and tornadoes.

Three Mile Island, a nuclear power generation facility, is located a few miles downriver. The Township lies within the 10-mile Emergency Planning Zone. The operator updates and distributes an Emergency Planning brochure for the properties within this zone every two years. The township has a link to the brochure on its website.

Parks, Recreation, and Open Space

Lower Swatara owns and maintains eight municipal parks with facilities. Memorial Park and Greenfield Parks are its largest, developed for baseball and soccer, respectively.

Shopes Gardens and Woodridge have additional baseball fields. Greenwood Commons has a nature area. Other parks are neighborhood parks with play equipment, pavilions and picnic tables, and grass fields.

In 2015, the Township acquired land at the east end of Fulling Mill Road. A public water access may be developed there, but there are no formal plans to date.

Figure 2-11 Memorial Park



Table 2-2 Township Parks

Township Park	Facilities	Size in acres
Georgetown Park	Playground, and picnic facilities	2.0
Greenfield Park	Soccer, playground, picnic and walking path facilities	20
Greenwood Commons Park and Nature Area	Playground and picnic facilities; nature area	2.4
Memorial Park	Baseball, softball, basketball, tennis, playground, and picnic facilities	16.1
Old Reliance Park	Basketball, playground, and picnic facilities	8.4
Rosedale Park	Basketball, playground, and picnic facilities	0.6
Shope Gardens Park	Baseball, basketball, playground, and picnic facilities	3.5
Woodridge Park	Baseball, playground, and picnic facilities	5.1
Fulling Mill Road site	Undeveloped; located in the floodplain	10.8

Source: Lower Swatara Township

Transportation

The transportation system in Lower Swatara is comprised of 17 miles of state and Interstate highways, 42 miles of local streets, a rail shortline for freight, bus service along the PA 230 corridor, the airport, and neighborhood sidewalks. Passenger rail services is available in Middletown.

The state and interstate highways give property owners in Lower Swatara immediate access to the national highway network, while local streets provide for circulation and connectivity. PennDOT has programmed several significant maintenance (preservation)

Figure 2-12 I-283 Interchanges with PA Turnpike and Highspire



projects for the state system, as listed in the table below. The Township has begun to outline local transportation needs for road and drainage maintenance and associated costs in an informal capital improvement program.

Table 2-3 Recent and Future PennDOT Projects

	Improvement Type	Let Date (Estimated)	Completion Date (Estimated)
I-83 Early Action (I-283)	Resurface	Completed	
PA 441 Bridge over PA 8020 ramp	Bridge Preservation	Completed	
Harrisburg Pike Resurface from PA 341 (Colebrook Road) to Tioga Avenue	Resurface	06/26/2014	07/22/2016
PA 283 Reconstruction 3 from Eisenhower Boulevard (PA 3001) to Colebrook Road (PA 341)	Reconstruct	02/23/2017	09/06/2019
PA-283/I-76 Interchange	Interchange Improvement	02/23/2017	09/06/2019
Airport Connector North Bound from PA 230 to PA 283	Resurface	None; Twelve Year Plan	
Oberlin Rd over PA 283 Ramp	Bridge Preservation	None; Twelve Year Plan	
Harrisburg Pike Bridge 2	Bridge Replacement	None; Twelve Year Plan	
Rosedale Ave over Airport	Bridge Preservation	None; Twelve Year Plan	
Spring Garden Rd over Airport Connector	Bridge Preservation	None; Twelve Year Plan	
Airport Conn South Bound	Resurface	Candidate; Decade of Investment	

Source: PennDOT MPMS IQ, accessed March 1, 2016.

The Middletown and Hummelstown Railroad is a shortline rail company providing rail freight service between industrial sites between these two communities and the Norfolk Southern main line.

The Capital Area Transit Authority's Route 7 connects Downtown Harrisburg, Capitol Complex, Riverfront Office Complex, and Steelton with Highspire, Middletown, Penn State (Middletown Campus), and Harrisburg International Airport.

Lower Swatara Township contains central Pennsylvania's largest airport facility, Harrisburg International Airport (HIA). The Susquehanna Area Regional Airport Authority (SARAA) oversees operations of the facility. Lower Swatara Township holds one of fifteen member seats on SARAA's board of directors.

Figure 2-13 Harrisburg International Airport



HIA comprises approximately 800 acres along the Susquehanna River, where the river helps minimize noise impacts to surrounding neighborhoods. The Terminal Complex includes the passenger terminal, aircraft parking apron, circulation roadways, rental car facilities, and short-term parking. The long-term (economy) parking area is located to the east of the Terminal Complex. Additional parking is available from private vendors off-site. The Airport has its own full-time police and fire departments as well as its own water and sewer systems.

In accordance with their Master Plan, SARAA is upgrading and expanding many facilities at HIA. These activities indicate that HIA will continue to grow in upcoming years and may present economic development opportunities for the Township.

Water Infrastructure

Suez, formerly United Water Pennsylvania, provides public water to more than 5,000 people in Lower Swatara Township. United Water acquires water from surface and groundwater sources and processes it at water treatments in Harrisburg and Hummelstown. The Harrisburg water treatment plant can generate up to 12 million gallons of water per day, while the Hummelstown water treatment plant can generate up to 2.8 million gallons of water per day. Approximately 90% of its treated water distributed to Lower Swatara customers comes from the Hummelstown plant and 10% from the Harrisburg plant. The well owned by the Susquehanna Area Regional Airport Authority (SARAA) provides water for the airport and is connected to the Suez water system. Treated water storage facilities within Lower Swatara Township include a 1 million gallon tank near the airport and a 300,000-gallon tank along Spring Garden Drive. Suez tests its water regularly to ensure that it meets all health and safety standards set by the U.S. Environmental Protection Agency (EPA) and the Pennsylvania Department of Environmental Protection (PADEP).

Residents outside of the public water service area acquire fresh water from private wells. In some cases, service areas are limited by the high costs of service area expansion versus the number of start-up users. Some residents have expressed a desire to connect to the public water system if and when it becomes available. A few residents have concerns about groundwater quality.

Wastewater

The Municipal Authority of Lower Swatara Township provides public sewer service to Township properties. There are more than 40 miles of sewer lines providing service for 2,200 residential and commercial customers in the service area. Wastewater is sent to three wastewater treatment plants in neighboring Highspire, Middletown, and Derry Townships. All three plants have capacity to process waste from future community and economic development in Lower Swatara.

There is a very small percentage of the Township that is not incorporated into the public sewer system service area. These lands are relatively undeveloped and are treated by individual on-lot septic systems owned and maintained by the property owner.

The Township Authority's Act 537 Plan, its plan for managing sewage disposal systems, was last revised in 1983. An update is scheduled to begin later in 2016.

Stormwater Management

Stormwater management has become increasingly regulated through the implementation of the federal Clean Water Act. Municipalities with separate municipal storm sewer systems (MS4) are required to adopt development and other regulations consistent with its permit issued under the National Pollutant Discharge Elimination System and the county integrated water resources plan, and to implement programs and practices to control polluted stormwater.

Lower Swatara Township has municipal stormwater regulations (Chapter 26, Water, of the Township Code of Ordinances) in addition to traditional subdivision and land development requirements. The ordinance intends not only to provide design, construction, and maintenance criteria for permanent onsite stormwater management facilities, but also to regulate the modification of the natural terrain and existing drainage patterns that characterize the Township. The Township has put programs and practices in place in support of stormwater management and is beginning to evaluate their impact.

Quality of Life Services

The Lower Swatara Police Department employs nine Patrol Officers, three Sergeants, two Detectives, one School Resource Officer, and the Chief of Police.

The Lower Swatara Fire Department is a volunteer organization providing fire protection and ambulance services. The Department owns and maintains all fire-fighting apparatus and the Fire Hall at 1350 Fulling Mill Road. Calls for service from 2012 through 2014 averaged 535 per year.

Figure 2-14 Lower Swatara Fire Department



Lower Swatara provides mandatory residential trash and recyclables collection and disposal services through its designated contractor. Commercial, industrial, and institutional establishments are ineligible for service through the Township contract.

Lower Swatara contracts with a single hauler for curbside collection of trash and recyclables.

Natural and Historic Resources

Natural resources create the physical environment where the community of Lower Swatara has grown. The environment in southern Dauphin County presents few significant constraints to community and economic development; floodplains and wetlands are the most notable.

A few natural communities of high quality are present along the Susquehanna River and the Swatara Creek, as documented by the Dauphin County Natural Heritage Areas Inventory (2005). The core habitats and their conservation recommendations include the following:

- A one-mile section of Swatara Creek at Fiddler's Elbow, including quickwater riffles with gravelly to stony stream bottom that supports three freshwater mussel species of concern in PA; Elktoe (*Alasmidonta marginata*), Triangle Floater (*Alasmidonta undulata*) and Yellow Lampmussel (*Lampsilis cariosa*). Maintaining water quality will enable these species to exist for future generations.
- Fiddler's Elbow Bluffs, the limestone cliffs and ledges along the creek, where native and sometimes rare plant and animal species are present.
- Swatara Creek Woods, where two PA-Threatened plant species have been found; *Ellisia nyctelea* and limestone petunia (*Ruellia strepens*). No conservation recommendations.
- Susquehanna River at Middletown, where the river and its banks support five species of concern including nesting Peregrine Falcons (*Falco peregrinus*) and Osprey (*Pandion haliaetus*); a plant species of concern waterpod (*Ellisia nyctelea*) and two additional species of concern. The riverbank is intensively developed in this area. Conservation and repair of a 100-meter-wide forested buffer along the riverbank will help protect the river from sources of pollution and habitat fragmentation. Development in floodprone areas should be restricted.

A 100-meter supporting landscape buffer is mapped and recommended as a forested corridor along the creek and river banks to help minimize erosion and sedimentation, absorb floodwaters, protect the waterways from other non-point sources of pollution during storm events, and help maintain cool water temperatures for improved water quality and wildlife habitat.

The Swatara Creek Watershed Association (SCWA), based in Lebanon, PA, is a non-profit environmental organization dedicated to protecting and improving water resources and the environment in the watershed from Schuylkill County to Middletown. The Manada

Conservancy, a land trust based in Hummelstown, engages in land preservation throughout the watershed.

The Township is home to a variety of old and locally valued structures, as well as a few that meet the standards for historic designation. The Pennsylvania Historical and Museum Commission's Cultural Resource database includes 66 records for 24 surveyed resources in Lower Swatara.

- Two buildings are officially listed on the National Register of Historic Places: the Star Barn, which is to be relocated to West Donegal Township, and the Conrad Alleman House on Farmhouse Lane in Old Reliance.
- Nine buildings and structures and one aggregate railroad district were eligible for the National Register at the time of their evaluation by State Historic Preservation Office. These include: the structure associated with the Pennsylvania Turnpike, the Pennsylvania Railroad: Mainline district, the Odd Fellows Home (now Middletown Home), five private homes, and two farms.
- Another nine buildings, structures, sites, and districts, dating from 1820 (Highspire (Swartz Nissley Cemetery) to 1960, were determined not eligible. These included resources submitted as the Middletown Air Depot District, the Middletown and Hummelstown Railroad, the Middletown Air Depot Base Chapel, and the Olmstead Army Airfield and Middletown Air Depot (with 18 associated buildings).
- Sixteen records for buildings and structures were associated with the Pennsylvania Turnpike, and thus listed among Lower Swatara resources. Twelve were evaluated as significant to the Turnpike; four were not.
- Three resources dating from 1826 to 1955 did not have enough information to evaluate their historic significance and determine edibility for the National Register: the Rosedale Farm House, the Nissley Drive post-World War II subdivision, and the Union Canal: Middletown to Reading.
- Finally, two were noted as demolished or destroyed: Whitehouse Lane Bridge and the Immaculate Conception Home for Children.

Local Government

The Township is governed by a five-member Board of Commissioners.

In 2015, the Township employed 43 full-time equivalent workers, or an estimated 5.1 municipal employees per 1,000 residents.

State and Federal Government Representation

Residents of Lower Swatara are represented by PA House Districts 106, PA Senate District 47, and Pennsylvania's 11th and 15th congressional districts to the U.S. Congress.

This community assessment outlines a variety of features and qualities that contribute or constrain Lower Swatara Township's quality of life and community and economic development potential. The assessment characterizes each aspect or topic and identifies implications and preliminary recommendations, which form the basis for the actions listed in Chapter 5.

Assets and Opportunities

Central Location and Good Highway Access

Lower Swatara Township is located central to several southcentral Pennsylvania employment and entertainment centers, as well as smaller urban hubs. The state and interstate highway systems, including the Pennsylvania Turnpike, make travel throughout south central Pennsylvania and the mid-Atlantic region convenient for Lower Swatara residents. Hershey, Greater Harrisburg, the West Shore, Carlisle, Lancaster, and York each lie within a 45-minute drive of the Township. Hummelstown, Elizabethtown, and other small towns are accessible via state and local highways, expanding "nearby" job, education, retail, and service opportunities.

From a business perspective, Lower Swatara and other communities in the southcentral PA region with available land along the interstate highway system are attractive locations for their access to markets from the East Coast to the Midwest. South central PA locations offer one-day access to these markets in an era when overall production-to-delivery efficiency is increasingly measured in days, not weeks or months, and online retail customers expect nearly the same-day service they used to receive in the store. As long as land is available within a few miles of PA 283, property owners and developers are likely to request rezonings for industrial development.

Implications

1. Located at the hub of state, interstate, and Pennsylvania Turnpike access, Lower Swatara is a good location for those who want or need to travel regionally by highway.

Relatively Low Crime and Crash Rates

While Middletown area crime rates are higher than those of many other regional communities, Lower Swatara experiences very little violent or property crime. The Police Chief confirmed that serious crime is low and property crime has diminished in recent years. Calls for service regarding fraud, identity theft, money scams, and credit card misuse have increased but in excess of national trends.

While motor vehicle crashes still occur, the severity of crashes has decreased with the increase in safety technology in motor vehicles. Most local crashes today are caused by human error, not street or highway

Figure 3-15 Township Police



design, again per the Police Chief. Regarding the problem locations that remain, many local drivers know where and when conditions are hazardous and take precautions to slow down or avoid such locations, and the Township continues to seek cost-effective improvement solutions.

The Harrisburg Area Transportation Study reports that approximately 455 traffic crashes have occurred each of the past five years. These statistics include incidents that occurred on interstate, state and local highways. Fatalities and major injuries have averaged 8 over the same time period. Aggressive driving was used to characterize 65-75 percent of incidents each year.

Table 3-1 Traffic Crash Statistics, 2010-2014

	2010	2011	2012	2013	2014	Total	Percent of County Incidents
Crashes	464	467	425	452	468	2,276	15.40%
Fatalities & Major Injuries	9	9	4	5	15	42	8.30%

Source: Traffic Safety in the Tri-County Region 2010-2014, February 2016

Implications

1. The Township is a comparatively safe place to live. Criminal activity and transportation safety are not constraints to community growth.

Choices in Housing Types and Neighborhoods

As described in Chapter 2, Lower Swatara offers housing choices in type, size, lot size, and location. Single-family home choices include early 20th Century two-story structures, mid-century ranch homes, and late-century styles with integrated garages. Townhomes are available in the Georgetown neighborhood south of Rosedale Avenue and in the Woodridge neighborhood. Apartments and mobile home options are also available.

Residentially-zoned land is available in the Residential-Urban, Residential-Suburban, and Residential-Agricultural districts and water and sewer infrastructure has capacity to support additional development.

Future development could further expand housing and neighborhood choice. Traditional neighborhood development integrates residential and retail uses, often with a mix of housing types. Several of these mixed-use developments have been constructed in Lancaster County—Brighton near Manheim, Richmond Square near East Petersburg, and Florin Hill in Mount Joy to name a few. With several large parcels zoned for residential use, and community interest in more local retail and restaurant options, a mixed-use approach could be successful. (Alternatively, coordinated development of adjoining residential and commercial districts with integrated transportation planning could achieve the same result.) Developers will examine the market to determine the viability of a mixed-

Figure 3-16 Edinburgh Road



use approach in Lower Swatara. The Township should explore “lessons learned” and “best practices” in zoning and development from these local mixed-use development projects.

Implications and Preliminary Recommendations

1. There is ample room for growth in the Township’s residential zoning districts. Such growth could be widely varied in housing unit type and density.
2. The Township, particularly the Planning and Zoning Coordinator and the Planning Commission, should become familiar with development approaches to housing in combination with development of commercial, institutional, and open space uses—specifically traditional neighborhood development and conservation by design.

Penn State Harrisburg and Harrisburg International Airport

Both Penn State Harrisburg and HIA evolved from re-use of the Olmsted Air Force Base and both have become significant hubs in Dauphin County. These institutions are portals for visitors from the regions and beyond to enter, experience, and develop impressions of Lower Swatara Township.

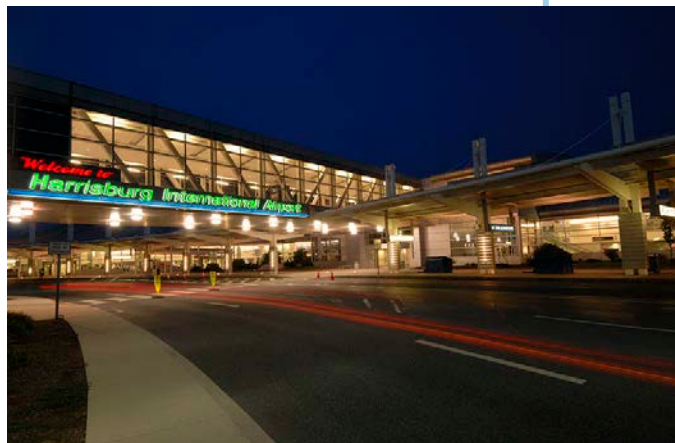
Penn State Harrisburg has become the fastest-growing campus in the Penn State system by drawing students from across the region and the state to begin their post-secondary education and career development, expanding undergraduate and graduate programs, redeveloping the former military campus into an educational campus to support those programs, and establishing partnerships with local industry to advance research and its application. Continued growth of the institution will attract undergraduate and graduate students, faculty and administrators, and even corporate partners, who will seek desirable residences in quality communities for themselves and their families.

HIA has expanded and modernized its commercial aviation and air freight support services in line with federal requirements and as a result of increasing demand from markets, including travelers to Penn State Harrisburg and Capital Region corporations. Today, HIA is looking forward to continued growth in both sectors through its 2014/15 master

Figure 3-17 Penn State Harrisburg



Figure 3-18 Harrisburg International Airport



plan to revise site programming and facilities, as evidenced by its recently submitted land development plans for an onsite hotel. In addition, HIA has participated in the Meade Avenue improvements in advance of leasing the North 29 site, the former long-term parking lot, for commercial development.

Implications

1. Continued growth of Penn State-Harrisburg will attract undergraduate and graduate students, faculty and administrators, and even corporate partners to the Middletown area. If Lower Swatara wants a portion of this associated residential and business growth, it will need to ensure that its borders and connections with the institution are seamless and welcoming.
2. HIA is developing additional facilities on its lands to serve air travelers on-site. This may reduce demand for traveler-oriented services along the edge and approach corridors to the airport.

Open Space

Natural, landscaped, and farmed open spaces retain rural character in this suburban community. These spaces include highly visible, wooded tracts along the Turnpike, PA 283, and Airport Connector corridors, riparian (waterside) areas along the Susquehanna River, Swatara Creek, and smaller drainageways, maturing landscapes in established neighborhoods and on industrial sites, actively cultivated farm fields, and Township parks of varies sizes. These unbuilt areas remind long-time residents of the countryside that was Lower Swatara years ago; for newcomers, the open spaces represent lower-density suburban living. They may even increase property values, as studies in the Delaware and Lehigh valleys have shown, by providing close to home opportunities to observe and experience the natural environment and to increase physical activity, and improve mental health.

Both the Delaware Valley and Lehigh Valley have quantified the impact of open space protection in their regions with studies entitled Return on Environment. They assessed economically measurable impacts on natural systems, air quality, health, outdoor recreation, economic activity, and property values. The studies can be found here:

- **Return on Environment:** [*The Economic Value of Protected Open Space in Southeastern Pennsylvania*, 2011](#)
- *Lehigh Valley Return on Environment*, 2014

Implications and Preliminary Recommendations

1. Natural landscapes visible from state and local highways are an important part of the Township's identity.

Figure 3-19 Penn Ridge Farm



2. Conservation of highly visible woodlands, riparian areas, mature landscapes, etc. should be encouraged. Establishment of new landscapes and naturalized areas in new development should also be encouraged.

A Growing Park and Recreation System

Lower Swatara has eight parks and one site for future parkland. Many of its parks were acquired through the land development process, namely a dedication of parkland provision in the ordinance. This approach allows the Township to increase its parkland in relative proportion to its population growth and growth locations. With additional land zoned for residential uses, this approach will continue to be effective for acquiring parkland in proximity to future neighborhoods.

From time to time, a property owner offers to sell or donate a parcel to the Township for parkland. The land may seem valuable, particularly when offered at or below market value, but the Township has no policy for evaluating these offers. Neither the recreational needs of present or future residents nor the potential for lands to function as stormwater management facilities is well known at this point. Criteria by which the Township could evaluate a parcel for its value as public land should be developed.

Lands available to the Township for donation or purchase should be evaluated based on long-term recreational and environmental needs.

Recreation programming for Lower Swatara residents is limited. The Olmsted Regional Recreation Commission and community leagues offer seasonal sports programs for children, youth, and adults. Municipal recreation departments in the Capital Region offer access to far more diverse programming: arts and crafts, fitness classes, non-traditional sports such as bowling, technology training, preschool activities, seasonal family events, discount theme park and resort tickets, bus trips, etc.

Periodically, the Township or the Recreation Commission should assess residents' recreational interests. Commission-program participants should be surveyed for their interest in additional programs. Other residents should have a reasonable opportunity to give their input, too.

In addition to a few park improvement ideas, Lower Swatara residents suggested that the Township develop off-road trails, as nearby Derry Township has done. A Swatara Creek trail has been a vision of creek and recreation advocates for many years. Middletown's 2007 comprehensive plan update includes a concept for linking its river and creekside parks and public places with a walking trail. This trail would logically extend north into Lower Swatara Township, and may at some point cross the creek into Hummelstown or Derry Township. A creekside trail, perhaps in conjunction with the Middletown and Hummelstown Railroad corridor, might be a place to start.

Preliminary Recommendations

1. Enhance existing parks with facilities and features that promote safe access and activity for all ages:

- walking paths for health and wellness.
 - naturalized meadows that require only seasonal mowing in place of lawn.
 - additional trees or tree clusters for shade relief from the sun.
 - additional parking at Memorial Park, which will likely require land acquisition.
2. Develop the Fulling Mill Road site; consider a water access to Swatara Creek and a trailhead (see preliminary recommendation 4 below). Retain and enhance the riparian buffer on the site.
 3. Develop a written policy with criteria for evaluating the costs and benefits of accepting parkland donations and purchase offers.
 4. Survey residents on their interest in expanded recreation program opportunities. Consider a school district-wide survey that would provide service-area results to Olmsted Recreation and municipal-level results to Lower Swatara, Middletown, and Royaltown.
 5. Consider renewal of the Olmsted Recreation Commission to serve the recreational needs of all ages. The school district and municipalities could request funding from the Pennsylvania Department of Conservation and Natural Resources for a peer-to-peer study to begin to re-define the Commission and its director position.
 6. Work with Middletown on the planning and development of a trail along Swatara Creek. Become familiar with the trail development process from others in the Capital Region: how to explore potential trail locations, how to talk about trail benefits, how and when to approach property owners to request an easement for trail use, etc.

Improved Planning for Local Road Maintenance

Many of the Township's roads were built in conjunction with mid- to late-century residential developments. Built to carry low traffic volumes and weights associated with residential deliveries, these roads have performed for several decades with minimal maintenance. As these roads and the utility infrastructure beneath them age, they add to the miles of local roads and streets that need more than resurfacing. They need repair after utility line replacements, drainage assessments and improvements, and other emergency and preventive maintenance.

The Township's Public Works Department is responsible for local road maintenance, including the drainage features associated with the road network. The Department and Township Engineer have outlined several road projects that are needed within the next decade. They have phased preparation and construction activities for each project over three years to accommodate realistic schedules and costs for permitting (year 1), drainage improvements (year 2), and paving (year 3). Projects in the first five years are cost-estimated; projects in the latter five years are not. Estimated costs for the first five years total \$11.9 million. Township staff has begun researching funding sources to supplement the Township's Liquid Fuels allocation to fund these projects.

This is the Township’s first attempt at long-range capital improvements planning. This approach anticipates improvement needs and schedules them proactively rather than waiting for conditions to deteriorate to a point of necessary replacement. This approach extends the life of road and drainage facilities and offers flexibility to address emergency needs and their costs as they arise without losing sight of upcoming needs. It also provides a ready list of project needs and their estimated costs for Township budget and finance planning. For example, there may be times when it is more cost-effective to fund multiple projects as a batch project. A ready project list is also helpful when a new funding source becomes available, such as Dauphin County’s new transportation funding, resulting from authorization in Pennsylvania’s Act 89 of 2013.

The Township has begun multi-year planning for maintenance and improvement of its transportation network.

A Revenue Tool for Local Road Improvement: The Traffic Impact Fee

The Township could employ another planning tool to generate revenue for transportation improvements and incentivize development in certain locations. Article V of the Pennsylvania Municipalities Planning Code (enacted as Act 209 of 1990) authorizes municipalities to use impact fees to cover the cost of off-site improvements necessitated by new land development within a designated service area; the tool is known as a traffic impact fee or Act 209 ordinance. The ordinance allows the municipality to charge a per-trip traffic impact fee based on the location and number of trips projected from new development in each designated service area. The fee can be waived in service areas where development is highly desired (i.e., infill or redevelopment) as an incentive and to relieve development pressure on other lands.

The fee revenue can be used for construction, land and right-of-way acquisition, engineering and some planning, and legal and debt services costs—only for activities identified in the Capital Improvements Plan. The fee revenue cannot be used to fund improvements that are needed to serve existing development. The Capital Improvement Plan tool ensures that the municipality has anticipated and documented transportation improvements associated with future development in a designated service area.

Preliminary Recommendations

1. Maintain the 5-year and 10-year road maintenance needs assessment as a programming and budgeting tool. Consider road conditions as well as safety among the needs transportation projects should address.
2. Contact municipalities that use an Act 209 ordinance to learn about their experience—their approaches, successes, and lessons learned. Evaluate and determine whether an Act 209 ordinance would be beneficial to the Township. If beneficial, develop and adopt a traffic impact fee ordinance.

Issues and Challenges

Truck Traffic between Middletown and PA 283

PA Route 441/Oberlin Road is a state highway connecting riverside communities from the City of Harrisburg south to Columbia. Locally, connections can be made to PA 283 and I-283. These limited-access highways carry high volumes of through traffic, and PA 441 is an important connection from points of origin to these freeways and from the freeways to final destinations.

PA 441 through Lower Swatara is a minor arterial that follows the local topography. The southern segment (outside the urbanized area) between the Turnpike overpass at

Middletown and Spring Garden Drive has several sharp curves over hilly terrain with narrow shoulder widths, making it a hazardous road segment. The northern segment (within the urbanized area) from Spring Garden Drive to Highland Street also has tight curves, though it is somewhat less severe in both horizontal and vertical alignments.

PennDOT has maintenance projects programmed for PA 441 in the distant future (2027-2034), but these are not scoped to address the overall alignment of the corridor.

Other minor arterials in Dauphin County have straighter alignments and wider shoulders. Eisenhower Boulevard, Vine Street, Derry Street, portions of Union Deposit Road, and Locust Lane are examples. Nyes Road still has a winding alignment and narrow shoulders, but has been improved where possible.

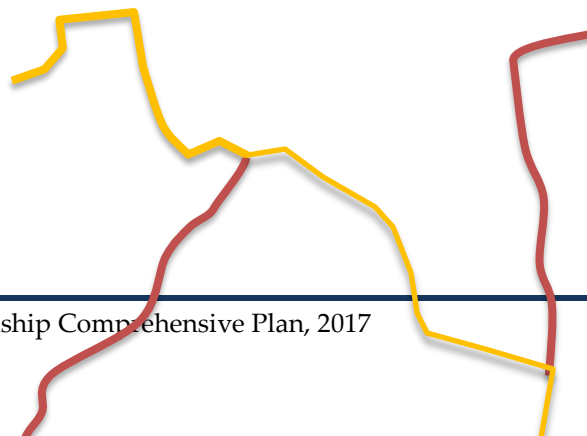
PA 441 is an important connection between Middletown and the region's freeways. It is also one of the most hazardous roads in the Township.

Trucks Using Township Roads

As an alternative to PA 441/Oberlin Road from Middletown to PA 283, trucks were using North Union Street to the Frank Linn Interchange and Rosedale Avenue to Stoner Drive to PA 441. Both routes used Township roads, which were not built for 40-ton tractor-trailers—they do not have a structural base of stone to distribute the load or shoulders to protect the cartway (the travel lane) pavement from deterioration.

The Township has taken recent action to weight-restrict traffic (namely trucks) from these routes. Formal posting of weight limits will follow shortly. Thereafter, Township police will enforce the weight limit, directing potential violators to a nearby truck scale to be weighed and, if overweight, fined based on the amount of excess weight. This action is expected to significantly reduce truck traffic on these Township roads. As a result, truck traffic will likely increase on PA 441/Oberlin Road, giving further support for improvement of, at minimum, the southern segment as described above.

Figure 3-20 Traffic Routes between Middletown and PA 283



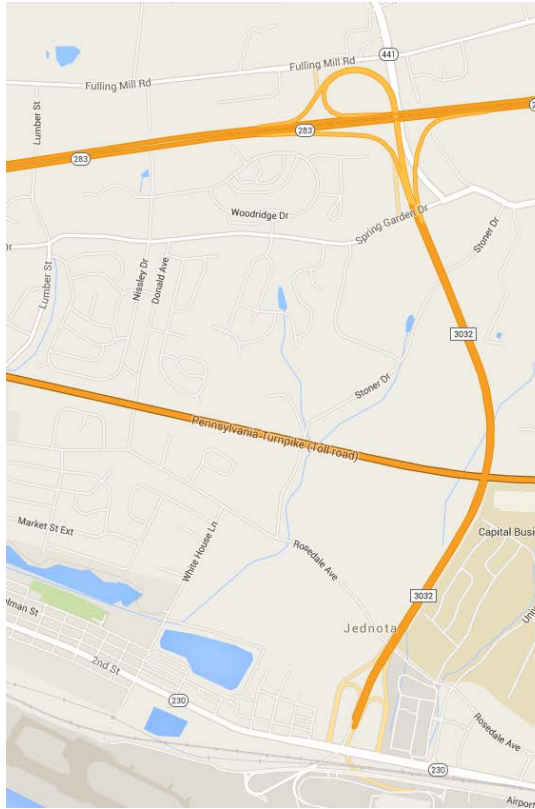


Figure 3-21 Concept Diagram for Access at Rosedale Avenue



Redevelopment of Linden Centre, future commercial development of the airport's North 29 site, and redevelopment on the west side of Middletown seeking to take advantage of the new Amtrak station location will generate additional truck traffic for commercial deliveries in the coming years.

The Township recognizes that additional access from Rosedale Avenue to the Airport Connector would alleviate travel demand on PA 441. At one time, Jednota Estates applied to PennDOT for a permit to construct a half-interchange. Interest in developing the Jednota lands waned and Jednota did not proceed with interchange design and construction. Jednota lands north of Rosedale Avenue are zoned for residential development. Lands south of Rosedale, however, are zoned for commercial and industrial uses and are likely to generate truck trips when developed.

With the Turnpike to the north, the Airport Connector to the east, and commercial/industrial lands to the south, the Jednota lands between Rosedale Avenue and the Turnpike are well buffered from residential uses and may be suitable for commercial/industrial uses. Rezoning of this area was examined (see page 35) and not recommended at this time. If Jednota or a future property owner were to submit a compelling development concept or if PennDOT agrees to permit access to Rosedale Avenue, rezoning of this site should be revisited. PennDOT/Harrisburg Area Transportation Study has identified an Airport Connector access project in its long-range transportation plan (long-term period, Years 2027-2034), but exact access point and alignments have yet to be determined. The estimated project cost is \$36 million.

Preliminary Recommendations

1. Advocate that PennDOT improve the alignment of the PA 441 corridor, through site-specific improvements or corridor-wide improvement.
2. If zoning along North Union Street is intensified, require improvement when development proposals are submitted for adjacent properties.
3. Alternatively, consider improvement of PA 441, namely straightening of curves and widening of the alignment, as well alternative approaches, such as swapping the segment of PA 441 from North Union Street to Spring Garden Drive for North Union Street from PA 441 to PA 283. This approach offers a more direct connection for trucks between Middletown and PA 283 and the Fulling Mill Road corridor and perhaps fewer improvements needed to the current PA 441 alignment to serve residential traffic. The feasibility and cost comparison of this approach would need to be studied.
4. Support the addition of a Rosedale Avenue interchange.

Limited Connectivity at Community and Neighborhood Scales

Residents in the planning process noted that Lower Swatara has no center—no place that residents identify as the center of community activity. This view is typical of townships that have no central crossroads village, and no civic building, major park, or space where citizens regularly gather socially, as a community.

In Lower Swatara, the condition is further complicated by the fact that two limited access highways traverse the Township and create barriers for the natural expansion of neighborhoods and business districts, where social activity can also occur. The Township is essentially divided into three areas:

- The PA 230 corridor and lands north to the Turnpike, where 230 and Rosedale Avenue are the only corridors linking residential areas west of the Airport connector with household retail east of the connector.
- Lands between the Turnpike and PA 283, where routes north and south pass over or under the highways and serve vehicular traffic but not bicyclists and pedestrians, and where Spring Garden Drive to PA 441 is the only east-west connector.
- Lands north of PA 283 that perhaps have the best connectivity in the Township, though some alignments are still challenging.

With so many barriers and incomplete connections for people, Lower Swatara is physically more divided than connected.

Established highway infrastructure and topography are real challenges to connectivity, but the Township has land available for development that could create the private and public space that functions as a community center as well as existing travel connections for a wider range of travel options.

To Create Centers of Community Life

The Township has an opportunity to guide the development of one or more centers for the Township community. Lands known as the Shope farm have been zoned for commercial uses due to their proximity to the PA 283 corridor and their potential to support construction of a thoroughfare to connect PA 441 and North Union Street. Together, a corridor of commercial uses, the public space of the street, and some green space (as a mini park or stormwater facility) could create a retail destination for citizens. Adjacent lands zoned for residential uses provide an opportunity to live “next door” to this potential community hub.

Lands owned by the Williams family on the west end of Fulling Mill Road were considered for rezoning in this planning process (see page 37). Here too a proximate mix of commercial and residential uses with associated parks and green space for stormwater management could emerge as a community center. The Kunkle Elementary School already draws residents to this end of Fulling Mill Road. Access (driveways) and improvements to Fulling Mill Road would need to consider the bus and parent traffic associated with this location.

The Shope area has better visibility and accessibility to high traffic volumes on PA 283 to support commercial activity but also has greater topographic challenges. The Williams area is closer to the residential areas of the Township and has more gradual topographic changes but is not as accessible to high traffic volumes.

Lands along Rosedale Avenue west of the Airport Connector are a third opportunity site for development that creates a community center—one in the southern portion of the Township. This area was also examined for rezoning (see page 35). One residential neighborhood and Highspire’s Reservoir Park with connections into Highspire are located to the west, while Linden Center and Penn State Harrisburg lie to the east. Stoner Drive and Nissley Drive offer local road connections into neighborhoods on the north side of the Turnpike.

Any or all three of these areas could be developed with a “Main Street”-style retail

Figure 3-22 Opportunity Sites for a Community “Center”



complex and other commercial services that draw resident and visitor patronage, provide a plaza or square for community events, and result in opportunities for planned and chance meetings among residents that strengthen the sense of community.

Alternatively, Township parks could become the social centers of the community if programs, activities and events were to draw residents to them regularly.

To Improve Neighbor Connections for Bicyclists and Pedestrians

The road network is currently the primary means of connectivity and as outlined above, has numerous use-versus-design, safety, and connectivity challenges.

Whether improved by a private developer as a result of proposed development needs and impacts, or by the Township or PennDOT, the project development process can include examination of other travel and transportation needs. Residents suggested several locations and improvements:

- Bicycle and pedestrian facilities along the roads and bridges over and under the Turnpike and PA 283 (Lumber Street, Nissley Drive, Stoner Drive, and Spring Garden Drive) to support neighborhood connections to other neighborhoods, parks, and retail, service, and employment destinations.
- Bicycle and pedestrian facilities on Rosedale Avenue between the residential neighborhoods on the west end and Linden Center and other commercial areas on the east end.
- Bicycle and pedestrian travel between Penn State Harrisburg and the redeveloping commercial area.
- Pedestrian routes along Fulling Mill Road serving the business parks.
- Bicycle and pedestrian facilities along North Union Street—a corridor used by Middletown residents to reach employment along Fulling Mill Road.

Replacement of the bridge from the east end of Fulling Mill Road to Schoolhouse Road in Derry Township was discussed as a potential reconnection. The Clifton Covered Bridge that once spanned the creek was washed out during Hurricane Agnes in 1972 and not replaced. Reconstruction today could provide a crossing for one or more mode of transportation:

Figure 3-24 South Nissley Drive Bridge



Figure 3-23 South Nissley Drive Bridge



1. As a bicycle-pedestrian trail crossing connecting the Township's future park site and a future creekside trail to Derry Township on Swatara Creek's eastern bank.
2. As a light vehicular and bicycle-pedestrian crossing, making the same connection for passenger vehicles and as an alternative to PA 283, Fiddlers Elbow, or PA 23.
3. As an all-traffic crossing able to serve as an alternative route during PA 283 incident closures.

The Steering Committee noted that each of these options has benefits but also impacts that would need to be examined and mitigated, and that ultimately Derry Township, Harrisburg Area Transportation Study, and PennDOT should be involved in evaluating this reconnection. At this time, the Township has little interest in pursuing this reconnection.

Preliminary Recommendations

1. Advocate for pedestrian facilities from Penn State Harrisburg to Linden Center.
2. Examine bridge rehabilitation and replacement projects for bicycle and pedestrian improvement needs.
3. Review development proposals for opportunities to interconnect neighborhood streets with trails for bicycle and pedestrian connectivity. For example, in nearby Elizabethtown, North Lime Street and Hickory Lane are not bridged over Conoy Creek, however two small paved paths allows bicyclists and pedestrians to move across this green space between the neighborhoods on either side.

Balancing Livability with Commercial and Industrial Development

The Great Recession and housing crisis dampened the pace of development nationally in the late 2000s. The residential market was hit hardest, but even commercial and industrial development slowed under more stringent access to financing. As the economy recovered, development activity began to pick up.

In 2013, Hillwood Investment Properties took interest in several properties along North Union Street north of Fulling Mill Road for industrial development. Hillwood's community meeting to explore residents' reactions to additional industrial development yielded significant opposition, and Hillwood has not pursued rezoning of properties in the mineral extraction and residential-agricultural districts for industrial development to date. In 2015, the Williams family met with the Township to express interest in rezoning and development of the farm in recognition of its location along the west end of Fulling Mill Road and its proximity to the Swatara interchange with I-283. In early 2016, the First Catholic Slovak Union (locally known as Jednota) and its marketing agent, NAICIR, contacted the Township with a request for zoning alternatives. All were interested in zoning alternatives for industrial development.

Regarding commercial development, the PA 230 corridor has historically been the Township's focus for retail uses and services. Portions of Fulling Mill Road and Spring Garden Drive have also been developed for commercial offices over the past 25 years. A three-phase retirement community is approved to absorb the remaining acreage in the commercial neighborhood district along Fulling Mill Road at Nissley Drive.

Two areas zoned for commercial use remain available: lands between the east end of Spring Garden Drive at the old firehouse and North Union Street, which were zoned to commercial neighborhood in the mid-2000s to create the potential for retail and restaurant development, as residents desired then, and support the extension of Spring Garden Drive to North Union Street, and a parcel at the intersection of PA 441 and North Union Street uphill from the school district campus. Additionally, a cluster of parcels southeast of the North Union Street interchange was considered for rezoning to commercial in 2015 then retracted. This area south of PA 283 has perhaps the best potential to attract the retail stores and restaurants that residents still request. It offers easy access to PA 283, visibility to tens of thousands of daily travelers, and proximity to Middletown, Hummelstown, and suburban Harrisburg markets. Its development challenges include topography, lack of water and sewer service at present, and potential need for North Union Street improvement from the access to the interchange. In addition, compatibility between the commercial use and existing residential uses would need to be carefully addressed, since commercial uses could have greater impacts than residential uses as permitted today.

Finally, amid the discussion of land use and zoning, the Steering Committee recognized that economic development could help reduce the burden of school district property taxes on residents. Commercial and industrial properties pay property taxes but do not generate students and the needs for educational facilities and services the way residential properties do. In light of recent increases in school district tax rates, the Committee aimed to consider the costs and benefits of additional commercial and industrial development in its land use recommendations.

The Steering Committee examined several alternative land use options for four sites and nearby available properties and reached consensus on the following recommendations. Figures and charts on the following pages illustrate points of discussion.

Preliminary Recommendations

See illustrations in on the following pages

Figure 3-25 Advanced Conversion Technology, Inc.



Area 1 North Union Street north of Fulling Mill Road

1. Retain the current zoning designation, Mineral Recovery.

Area 2 North Union Street south of PA 283

1. Rezone the southeast quadrant of the Frank Linn Interchange (North Union Street) to Commercial.
2. Retain the current zoning designations for the remaining portions of the North Union Street corridor from PA 283 to PA 441 at this time.
OR Consider rezoning the Residential-Agricultural district in this location to Residential-Suburban for consistency with adjacent lands and in support of economically feasible extension of water and sewer utilities to serve this area.

Area 3 Rosedale Avenue west of the Airport Connector

1. Retain the current zoning designations for the Rosedale Avenue corridor west of the Airport Connector at this time.

Area 4 West Fulling Mill Road

1. Rezone the Williams Farm along the north side of Fulling Mill Road and the adjacent residentially zoned parcels along the west side of Longview Drive to neighborhood commercial at a depth consistent with the existing neighborhood commercial district on the east side of Nissely Drive and Hollywood Drive.
2. Rezone the Williams parcel along the south side of Fulling Mill Road between Lumber Street and the existing Light Industrial Park district to neighborhood commercial.
3. If the school closes or relocates, revisit the zoning designation for remaining parcels on the south side of Fulling Mill Road.

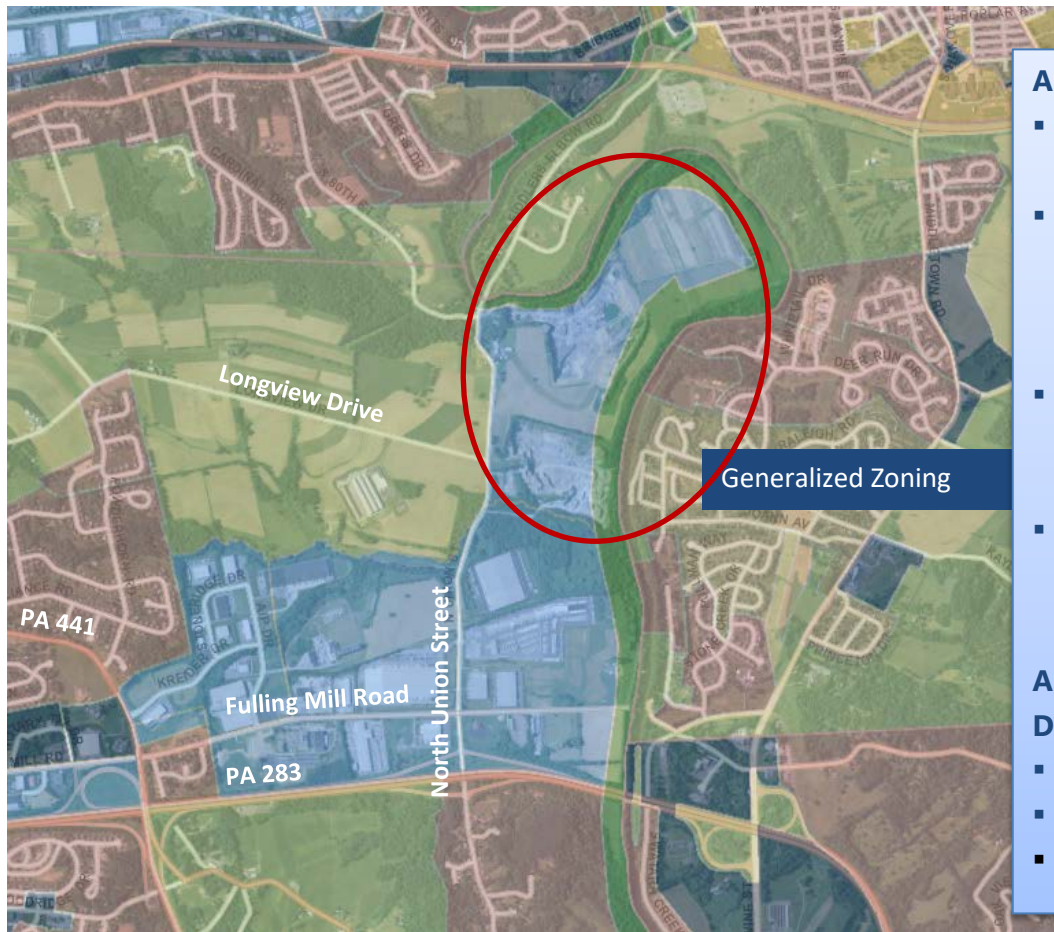
Zoning Ordinance Review

In discussing the land use options for these locations, the Steering Committee reviewed the residential, commercial and industrial zoning districts for awareness of their differences. An overview of each district's purpose and permitted uses is shown in Figures 3-9, 3-10, and 3-11, beginning on page 35.

Preliminary Recommendation

1. Conduct a detailed review of existing use locations and patterns and the zoning regulations to determine if the four industrial zoning districts can be streamlined.

Area 1: North Union Street, north of Fulling Mill Road

**Area Features:**

- Nearby access to PA 283
- Contained by North Union Street and Swatara Creek
- Karst geology (prone to sinkholes)
- Adjacent: Indian Echo Caverns, residential uses

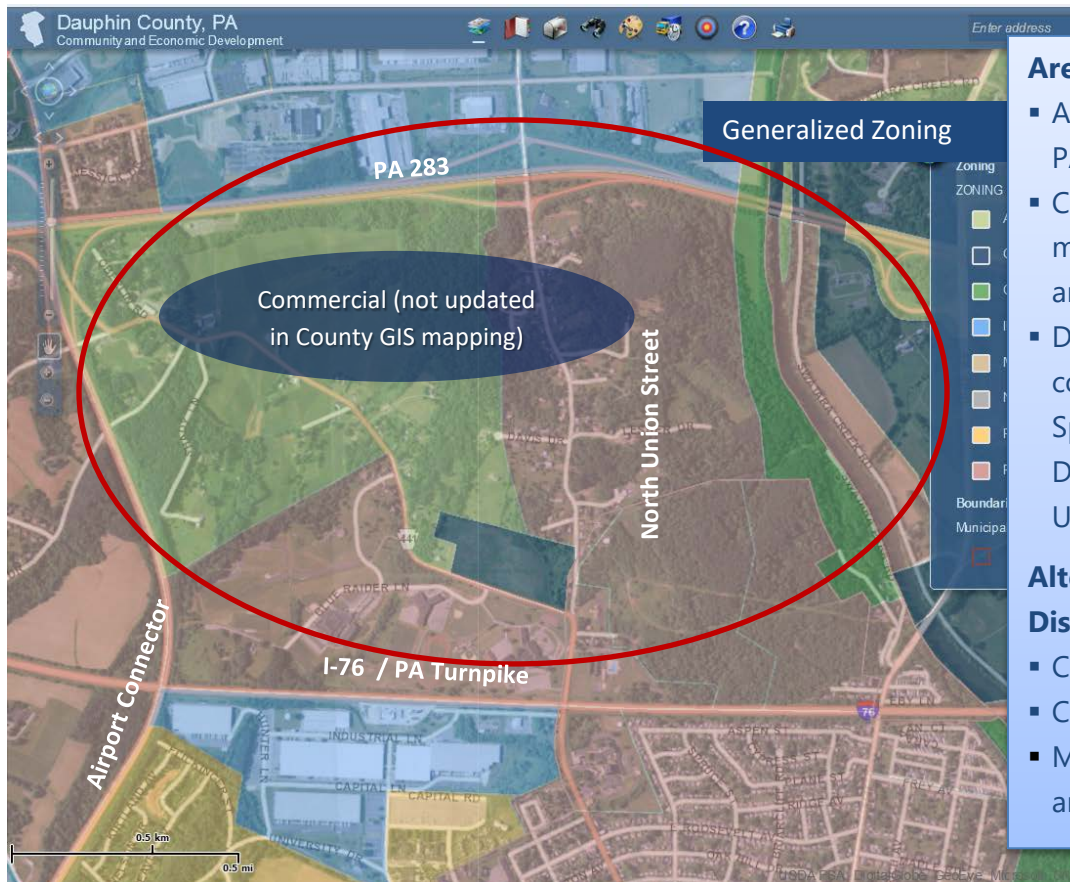
Alternative Uses Discussed:

- Industrial
- Office Park
- Recreation

Source: Dauphin County GIS Parcel Viewer

Area 1	Alternative Uses/Rezoning	Comments
Current Zoning	Industrial (Mineral Recovery)	N Union Street and Swatara Creek are reasonable district boundaries.
Alternative 1	<ul style="list-style-type: none"> ▪ Industrial ▪ Industrial Park ▪ Office Park 	Current condition of Fiddlers Elbow Rd and bridge is a constraint to more intensive use, i.e., heavy traffic. Portion north of bridge is posted, i.e., weight-restricted; Lower Swatara portion is not posted. With truck restriction or road improvement, alternatives could be feasible.
Alternative 2	<ul style="list-style-type: none"> ▪ Recreation – commercial or public 	Recreation/open space use is of interest for the abundant creek access, proximity to Indian Echo Caverns, and the natural communities that, if still viable, could be protected.

Area 2: North Union Street south of PA 283

**Area Features:**

- Access to PA 283, PA 441
- Contained by major highways and creek
- Desired street connection from Spring Garden Drive to North Union Street

Alternative Uses Discussed:

- Commercial Retail
- Commercial Office
- Mixed Residential and Commercial

Source: Dauphin County GIS Parcel Viewer

Area 2	Alternative Uses/Zoning	Comments
Current Zoning	Airport Connector east to North Union Street: Residential-Agricultural North Union Street east to Swatara Creek: Residential-Suburban	Area is contained by the Airport Connector, PA 283, Swatara Creek, and MASD campus and Greenfield Park. Topography constrains but does not prohibit intensive use. Commercial Neighborhood zoning was intended to support extension of Spring Garden Drive to North Union Street.
Alternative 1	Residential-Agricultural to ▪ Residential-Suburban	Water and sewer services required for suburban development density.
Alternative 2	Residential-Suburban to ▪ Commercial	Consistent with Planning Commission's Fall 2015 recommendation for lands adjacent to PA 283 interchange.
Alternative 3	All to ▪ Mixed Residential-Commercial	Ratio of residential to commercial to be determined by developer or by Township ordinance. Commercial would likely be highway-visible.
Alternative 4	All to ▪ Commercial Neighborhood ▪ Office Park	Would require major access improvements and significant stormwater management.

Area 3: Rosedale Avenue west of the Airport Connector

**Area Features:**

- Nearby access to PA 230, airport and Airport Connector
- Proximity to Highspire's Reservoir Park
- Access to water and sewer

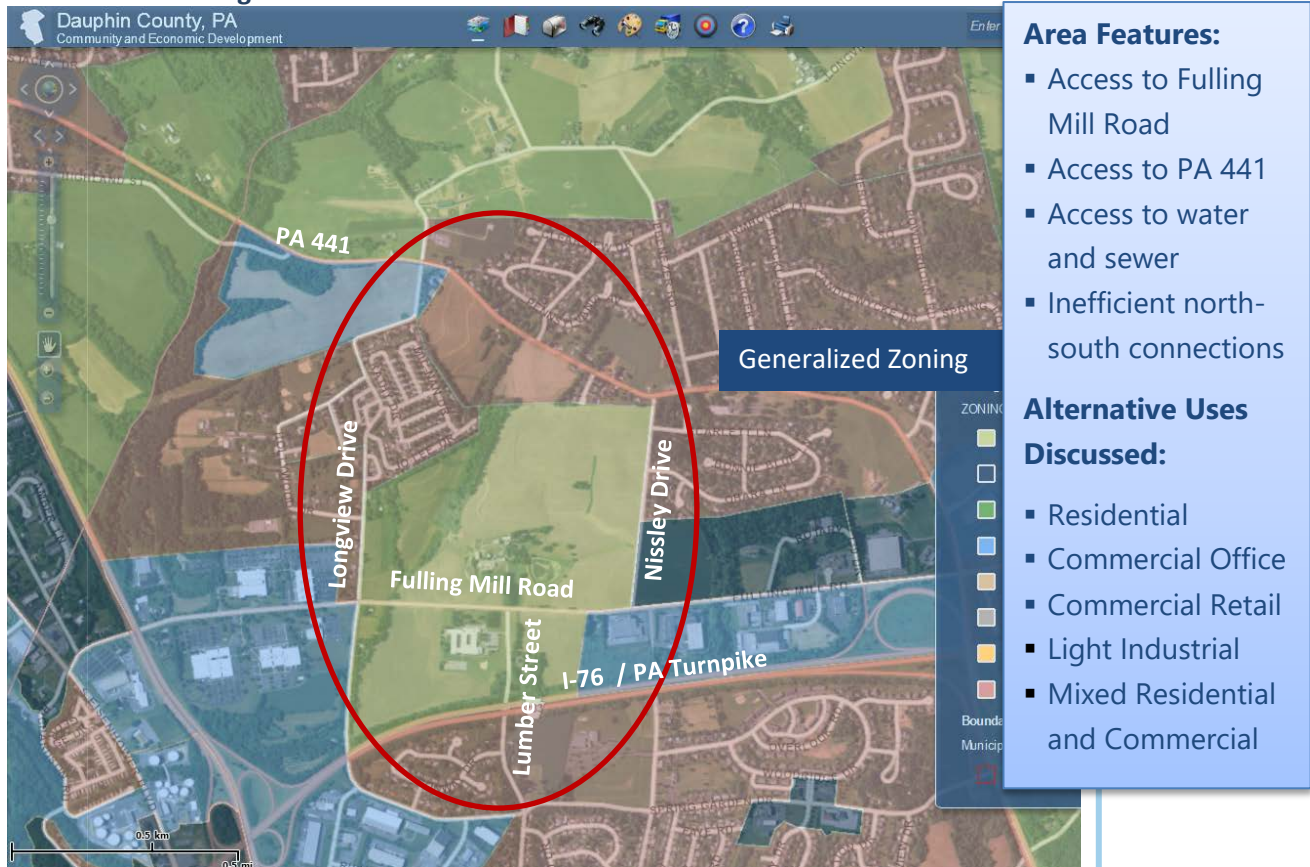
Alternative Uses Discussed:

- Commercial Office
- Light Industrial
- Commercial Retail
- Mixed Residential and Commercial

Source: Dauphin County GIS Parcel Viewer

Area 3	Alternative Uses/Zoning	Comments
Current Zoning	Northside of Rosedale Avenue: Residential-Urban Corner of Rosedale Avenue and Whitehouse Lane: Office Park Southside of Rosedale Avenue: Industrial Park-Limited	Residential use to the west and south. Turnpike and Airport Connector highways are barriers to the north and east. Current condition of Rosedale Avenue may be constraint to more intensive use, i.e., truck traffic. Development would require road improvements (intersections, turning lanes) and significant stormwater management. Development could benefit from/contribute to access improvement to Airport Connector.
Alternative 1	Residential-Urban to <ul style="list-style-type: none"> ▪ Office Park ▪ Industrial Park-Limited 	Same as above.
Alternative 2	<ul style="list-style-type: none"> ▪ Mixed: Residential-Commercial 	Same as above. Also, ratio of residential to commercial could be determined by developer or Township ordinance. Residential could include a mix of single- and multi-family.

Area 4: West Fulling Mill Road



Source: Dauphin County GIS Parcel Viewer

Area 4	Alternative Uses/Zoning	Comments
Current Zoning	Residential-Suburban Residential-Agricultural	Existing residents to the north, west, and east may expect residential uses. Development presents potential extension of Lumber and other streets. Kunkle Elementary School is located at Fulling Mill Road and Lumber Street. Residential retirement and commercial uses are approved in the commercial district east of Nissley Drive.
Alternative 1	Residential-Agricultural to ▪ Residential-Suburban	Uses permitted in Residential-Suburban are compatible with existing residences but not with the corridor's existing uses.
Alternative 2	Residential-Agricultural to Commercial/Industrial: ▪ Commercial Neighborhood or Office Park ▪ Industrial Park or IP Limited	These uses are generally compatible with development along the Fulling Mill Road corridor. However industrial uses are not necessarily compatible with residential uses unless carefully integrated with the existing development scale and buffered from visual and operational impacts.
Alternative 3	Residential-Agricultural to: ▪ Commercial Neighborhood or Office Park, and ▪ Residential-Agricultural to Commercial	Largest parcel could be zoned into multiple districts, e.g., one non-residential district fronting Fulling Mill Road and one residential district in the northern section.
Alternative 4	Residential - Agricultural to ▪ Mixed: Residential - Commercial	The mix of residential and commercial could be determined by developer or Township ordinance. Residential could be a mix of housing types.

Figure 3-26 Comparison of Residential Zoning Districts

Purpose	Residential -Agricultural	Residential -Suburban	Residential -Urban	Residential-Multi-Family
	<ul style="list-style-type: none"> • promote agricultural activities • prevent adverse effects resulting from encroachment by incompatible development types and intensities 	<ul style="list-style-type: none"> • provide for single-family residential living at low development densities 	<ul style="list-style-type: none"> • residential living opportunities of a more urban nature at greater densities with a limited diversification of residential unit designs 	<ul style="list-style-type: none"> • a variety of residential living opportunities at greater densities
Permitted by Right	<ul style="list-style-type: none"> • Single-family detached • Places of worship • Public Education, Public Recreation • Municipal, Public utility • 10 agricultural uses and related • Accessory 	Same + <ul style="list-style-type: none"> • Parochial Education, library, museum • Ag activities • Accessory 	Same + <ul style="list-style-type: none"> • Single-family, semi-detached • Home gardening • Accessory No agricultural uses	Same + <ul style="list-style-type: none"> • Single-family attached • Multi-family • Boarding, lodging, rooming houses • Private Recreation • Med, dental clinic • Hospital • Nursing, convalescent homes No agriculture
Permitted by Special Exception	5 uses including hospitals, nursing homes, convalescent homes	4 uses including medical and dental clinics and TND	3 uses including medical and dental clinics	2 uses including var. apt types and accessory uses to them
Minimum Lot Size	1 acre	1 acre 20k sf w/ public sewer	1 acre 20k sf w/ public sewer and well 10k sf w/ water and sewer or 5k sf for semidetached	10k sf w/ water and sewer

Figure 3-27 Comparison of Commercial Zoning Districts

	Commercial Neighborhood	Commercial Highway	Office-Park
Purpose	<ul style="list-style-type: none"> serve the needs of the surrounding residential neighborhood, with convenience goods and services 	<ul style="list-style-type: none"> accommodate a wide range of shopping and service functions 	<ul style="list-style-type: none"> permit combined business and office activities
Permitted by Right	<ul style="list-style-type: none"> Stores Eating and drinking places <4,000 sf service offices Municipal Accessory 	<ul style="list-style-type: none"> Stores Eating and drinking places Service offices Auto dealers and service stations Auto rental, repair Lodging places Sports/Rec Clubs Commuter bus/train services RV parks Municipal 	<ul style="list-style-type: none"> Service Offices Medical clinics Hotel/conference Scientific R & D Personal services – health/fitness, day-care Restaurants Convenience store Municipal Public utility
Permitted by Special Exception	2 uses including residential retirement student housing		n/a
Minimum Lot Size			

Figure 3-28 Comparison of Industrial Zoning Districts

Purpose	Industrial	Industrial Park	Industrial Park Limited	Manufacturing Limited
	provide employment opportunities and establish land for intensive industrial uses	maximize the light industrial and commercial/ office development in a planned park-like environment	provide for light industrial development of a less intensive nature, along with commercial/ office, in a planned park-like environment	provide for certain types of manufacturing and industrial uses minimize their incompatibility with other districts
Permitted by Right	Auto-related Manufacturing Lumber-related Construction trades Freight, trucking Wholesale, warehouse Power stations Municipal Various agricultural uses and related Accessory	Manufacturing Business Offices R & D Warehouse/ distribution Municipal Public Utility Various agricultural uses and related Accessory	Same	Auto-related Manufacturing Lumber-related Construction trades Wholesale, warehouse Power stations Municipal Various agricultural uses and related Accessory No freight, warehouse n/a
Permitted by Special Exception	2 uses - windmills, heliports	3 uses – same + outdoor storage	Same	

Repetitive Flood Damage and Recovery Costs

Portions of the Township are prone to flooding. In certain locations, flooding is largely a natural condition, but in some areas, grading for development created or exacerbated drainage patterns that contribute to flooding. The Jednota Flats between the airport, which was heavily graded in the development of the air base and later the airport, and the Turnpike, also disruptive to natural drainage patterns, is one such area. Swatara Park Road and Lumber Street are others.

Flood damage is costly for property owners and the government agencies that assist in flood recovery. Where repetitive flood damage can be eliminated, property owners and governments can save time, effort, and dollars in damage prevention and restoration.

The Township has worked in conjunction with the Pennsylvania and Federal Emergency Management Agencies (PEMA and FEMA) with willing property owners to remove uses and structures that encounter repeated damage from floodprone areas, restoring the land to an open space condition where flooding has minimal impacts.

Preliminary Recommendations

1. Continue to seek out willing property owners in flood-prone areas for voluntary buyouts.
2. Continue to identify county, state, and federal sources to fund voluntary buyouts.

Unfunded State Requirement for Elimination of Pollution in Stormwater from Municipal Separate Storm Sewer Systems (MS4)

The U.S. Environmental Protection Agency's program to eliminate pollution in stormwater from entering waterways was established in 1990 under the Clean Water Act. It relies on expansion of the National Pollutant Discharge Elimination System (NPDES) permit program. Phase 1 implementation in the early 1990s was targeted to the largest systems and pollutant sources. In 1999, Phase II extended coverage of the NPDES permit program to include "small" MS4s in urbanized areas, as classified by the U.S. Census Bureau.

The NPDES permit program requires operators of MS4s to implement programs and practices to control polluted stormwater. Each MS4 must outline its program, including the "six minimum controls," identify its goals and best management practices, and report annually to the NPDES permitting authority on its progress. Neither the EPA nor the Pennsylvania Department of Environmental Protection, the NPDES permitting authority in Pennsylvania, provides financial assistance to help system operators take action to comply. Thus, many municipalities view the change in the permit as an unfunded mandate for action and associated costs.

Six Minimum MS4 Controls

1. Public education and outreach (often fulfilled by information in municipal newsletters).
2. Public participation and involvement.
3. Illicit discharges detection and elimination.
4. Construction site runoff control.
5. Post-construction stormwater management in new development and redevelopment.
6. Pollution prevention and good housekeeping for municipal operations and maintenance.

PA DEP notified the Township in 2014 that MS4 program compliance would soon be required for its general NPDES permit, held since 2003, because the Township lies in the Chesapeake Bay watershed and local streams are impaired. Penn State Harrisburg and the Harrisburg International Airport have separate NPDES permits. These storm sewer system operators must also comply with the program.

The Board of Commissioners has authorized the Township municipal authority to oversee stormwater infrastructure, including maintenance, inspection, and improvement of public stormwater facilities. The authority could charge fees to all property owners to generate revenue to cover the cost of these services. To date, no fees have been proposed or approved.

The Board has also directed Township staff to begin revising or establishing new programs and practices required for compliance. Revised ordinances for subdivision and land development and stormwater, to remove development requirements and standards that negatively impact water quality and add those that positively impact water quality, have not yet been prepared but are expected to impact the development process and increase the cost of planning/design, approval, and permitting.

Preliminary Recommendations

1. Update ordinances to remove development requirements and standards that negatively impact water quality and add those that positively impact water quality.
2. Determine the need, and if needed, the value, for a municipal authority fee to property owners to fund management and maintenance of community stormwater facilities.
3. Conduct administrative and enforcement practices to maintain compliance with current and future MS4 requirements.

Regionalization of Police Services

In 2015, Dauphin County completed a study of the potential costs and benefits of regionalizing local police forces. Though the issue of police service costs was not raised by Township officials or residents, the potential cost savings and other benefits deserve acknowledgement and potentially future community discussion.

The Dauphin County Policing Services Study took account of police services, 2013 crime rates, and 2014 staffing and costs for all 16 of the existing police departments. It reported 17 sworn officers and one civilian employee for Lower Swatara at a 2014 cost of \$1,950,490.

The study discussed the advantages and disadvantages of regionalization in terms of quality of service and costs. The study noted that cost savings were assumed to take place gradually over several years due to personnel attrition, not layoffs. The study then analyzed seven scenarios or options for regionalization as shown in Table 3-1.

Table 3-4 Summary Cost Impacts of Seven Regionalization Options

Options	Current Costs	Projected Year-One Costs	Cost Savings (or Increase)
1. Dauphin County Metropolitan	\$38,838,711	\$23,507,490	Savings: \$15,33,221
2. Harrisburg Metropolitan	\$55,333,058	\$37,124,420	Savings: \$18,208,638
3. Southern Dauphin Merger	\$15,643,813	\$11,615,720	Savings: \$4,028,093
4. Southern Dauphin Regional	\$7,396,017	\$6,720,560	Savings: \$675,457
5. Derry Regional	\$6,971,439	\$4,729,680	Savings: \$2,241,759
6. Northern Regional	\$447,851	\$2,071,660	Increase: \$1,623,809
7. Countywide	\$55,780,909	\$39,609,670	Savings: \$16,171,239

Source: Dauphin County Policing Services Study, 2015

Lower Swatara was included in five of the scenarios. Cost savings of 12 to 37 percent were projected. Option 4, which analyzed the consolidation of five departments in southern Dauphin County, resulted in a projected eight percent increase over 2014 policing costs.

Table 3-5 Per Resident Cost Impacts of the Regional Policing Options involving Lower Swatara

	Lower Swatara		
	Per Resident Cost	Per Resident Cost Savings	Percent Savings
Current Police (2014)	\$235.81		
Future Police Options			
Option 1: 12 Urban/Suburban Borough and Township Departments	\$151.65	\$84.16	36%
Option 2: 12 above + City of Harrisburg	\$191.5	\$44.31	19%
Option 3: 7 southwest departments, not City	\$207.70	\$28.11	12%
Option 4: 5 southern departments, not City	\$253.94	-\$18.13	-8%
Option 7: All 17 departments	\$147.74	\$88.07	37%

Options 5 and 6 did not include Lower Swatara Township in the regional service area.

Source: Dauphin County Policing Services Study, 2015

The study should be viewed as a reference for municipalities interested in regionalized policing services. Local and countywide discussion of the study is likely to continue in 2016. Township Commissioners should engage residents, corporate citizens, and the police department as they decide whether or not the Township is interested in a next phase of study and what questions and concerns should be addressed in making decisions about Township policing.

Preliminary Recommendations

1. Invite Township citizens to discuss support, concern, and questions about policing services. This could be done through a special meeting or workshop, or a dedicated agenda item spanning several regular Board meetings. A summary of comments could be posted on the Township website or otherwise made available as a record of this discussion and reference for Board decision-making.

Declining Fire Department Volunteerism

Like many civic organizations, the Lower Swatara Fire Department has experienced declining trends in volunteer participation. According to fire department officials, today's volunteers spend less time fighting fires and more time training and fundraising, which discourages many from participating. When the department doesn't have the manpower to respond to call, another company or department must travel farther and longer to the scene, putting life and property at greater risk.

This issue is common across Pennsylvania where volunteer fire departments are the norm in small communities. Culturally, people are less interested in civic service organizations and their employers are less flexible in allowing their participation. In the mid-2000s, the Pennsylvania Legislative Budget and Finance Committee examined the feasibility of regionalizing departments, and the Center for Rural Pennsylvania explored Volunteer Firefighter Recruitment and Retention in Rural Pennsylvania. The first concluded that regionalization was an option best evaluated locally and the second made policy recommendations for the state, which would aid all rural fire departments. Neither identified local actions for firefighter retention and recruitment.

This issue will need to be addressed at some point in the future. The Township and the fire department may want to exchange retention and recruitment ideas with other municipalities and departments sooner, rather than later, to extend the life of the volunteer system. If the regional policing study is embraced as valid and implementable, perhaps Dauphin County would lead a similar study for fire departments.

Implications and Preliminary Recommendations

1. Based on current trends, the department may not be able to staff service calls, particularly during weekday business hours, by 2025. If local 24/7 fire protection service is desired, the Township may need to hire firefighters to ensure daytime service coverage.
2. Exchange volunteer firefighter retention and recruitment ideas with other municipalities and departments.
3. If fire protection services are studied similar to police service regionalization, support Dauphin County in its leadership of a regional fire protection service study.

The Future of Farming in the Township

Land in agricultural use in the Township declined from 2,166 acres in 2002 to 1,804 acres in 2014, as classified by the Tri-County Regional Planning Commission. More than half of this 362-acre change in use occurred between 2002 and 2008. Since 2008, changes from agricultural use to another have included:

- 55 acres to transitional use (under construction).
- 26 acres to industrial use.
- 16 acres to recreational use.
- 48 acres to passive use (meadow, brush, mixed vegetation, and woodland).

In counties where fertile soils are abundant, farmland preservation programs pay for the development rights of farmland at rates that protect the value of land for future farming. In Dauphin County, soils on average are not very fertile and the rates the county can afford to pay for development rights are not competitive with values the development sector offers. Therefore farmers have not been interested in the program and lands remained zoned for future non-agricultural uses.

At this point, the Township expects that by 2025 some additional acreage will change from agricultural use to residential or other intensive use, particularly in infill areas. The amount of change will depend on market demand. More than half of the remaining 2014 farmland is contiguous along Longview Drive and largely zoned in Residential-Agricultural (R-A) District. The Residential-Agricultural (R-A) District allows agricultural uses as well as the following non-agricultural and non-agricultural business uses, permitted by right:

- | | |
|--|--|
| A. Single-family detached dwelling units; not manufactured/mobile homes. | D. Public recreation areas. |
| B. Churches or similar places of worship; their social facilities. | E. Municipal buildings and facilities. |
| C. Public and private educational facilities. | O. Public utility service structures and facilities. |

It also allows these uses by special exception:

1. Cemeteries.
2. Accessory (secondary or “in-law”) apartment dwelling.
3. Wind energy conversion systems.
4. Country clubs and golf courses.
5. Hospitals, nursing homes, convalescent homes.

Figure 3-29 Penn Ridge Farm



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Vision

With an understanding of the assets and opportunities Lower Swatara can build upon and the issues and challenges it must also face, the Township can frame a vision for the years ahead to focus its policies and practices. This vision outlines goals that address the various elements of comprehensive planning.

In 2025, Lower Swatara Township will be a community that...

Offers housing choices in type, size, lot size, and neighborhood character.

Values businesses and institutions as employers, resident recruiters, and community partners.

Has new retail and industry that provides employment opportunities, serves residents and attracts visitors and new residents, and improves the Township and school district tax base.

Has proactive and responsive public safety services.

Has new parks and expanded recreational facilities and activities.

Manages water use, including stormwater, to minimize water pollution.

Restores flood-prone areas to open space, where feasible.

Manages, maintains, and improves its transportation network and infrastructure for modern use.

Works cooperatively with the Middletown Area School District with regard to community development, recreation opportunities, and commitment to meeting the educational, social and health needs of students and families.

Community and Economic Development Objectives

In support of this vision for community and economic development, Lower Swatara Township will conduct local government activities and administer public services following these objectives.

Housing

1. Provide opportunity for a range of housing types, sizes, lot sizes, and neighborhood choices, including development approaches to housing in combination with development for commercial, institutional, and open space uses.

2. Maintain effective code enforcement that promotes safe housing conditions in existing and proposed units. Safe housing efforts can also include public service (educational) announcements on housing maintenance to prevent loss of life and property in the event of a fire, hazard, or other emergency.

Economic Development

3. Designate suitable locations for business and industry and coordinate infrastructure planning and improvement, as needed.
4. Exchange information on community planning and development projects among major employers and institutions, including the school district.
5. Identify opportunities for coordinated planning, design, construction, and impact mitigation.

Community Services and Facilities

6. Maintain support for public safety services that are effective. Evaluate the effectiveness of facilities, vehicles, equipment, and staff with metrics related to:
 - a. Preventing, investigating, and helping to prosecute criminal activity.
 - b. Responding to, investigating, and preventing fire incidents.
 - c. Responding to medical emergencies and assisting in medical transports.
 - d. Communicating messages about public safety to residents and corporate citizens.
7. Manage public parkland acquisition, development, and maintenance in line with use and need.

Related programs and practices should:

- a. Manage the overall public parkland acreage owned by the Township, including acquisitions.
 - b. Improve parks to accommodate people of all ages and abilities.
 - c. Develop parkland with recreation facilities that serve the needs of current and future residents; consider demographic trends and expressed recreational activity interests.
 - d. Reserve lands in a natural, low-maintenance condition as nature lands or for future facility development.
 - e. Involve user groups, i.e., sports clubs, in discussions of park and facility maintenance.
 - f. Provide adequate parking for the use of facilities.
 - g. Assess residents' use of parklands and facilities.
8. Provide access to expanded recreational programs, i.e. expanded programs provided by the Olmsted Recreation Commission, the Township or other recreation service provider.

Related programs and practices should:

- a. Assess residents' participation in recreation programs and activities and their interest in additional ones.
 - b. Partner to provide residents with access to existing activities or local programming, when feasible.
 - c. Ensure ADA-access to all programs.
- 9. Integrate cultural and historic resources with parks, trails, and other public facilities.

Water Infrastructure

- 10. Manage and maintain water, sewer, and stormwater utilities for modern use and potential community growth.

Related programs and practices should:

- a. Maintain updated infrastructure assessment and improvement planning.
 - b. Modernize treatment techniques for cost-effectiveness and minimal pollutants.
 - c. Maintain utility facilities to maximize efficiency of conveyance and treatment costs.
- 11. Protect and improve water quality from the impacts of existing and new development.

Related programs and practices should:

- a. Encourage developers to propose innovative ways to meet stormwater requirements.
 - b. Encourage property owners to use low-maintenance landscaping—meadows or woodlands—in place of large expanses of lawn. A lawn edge at the perimeter can demonstrate that the natural area is intentionally maintained.
 - c. Retain and restore riparian buffers on Township-owned lands.
- 12. Protect floodplains and flood-prone areas from development; restore developed flood-prone areas to open space, where feasible.

Transportation

- 13. Manage, maintain, and improve the transportation network for local users and planned future expansion.

Related programs and practices should:

- a. Assess road conditions regularly and program needs into the capital improvement plan.

- b. Expand facilities for bicyclists and pedestrians as free and active transportation choices. Examine bridge rehabilitation and replacement projects for bicycle and pedestrian improvement needs.
- c. Consider transit-related standards for corridors that may benefit from bus service in the future. Examples are sidewalks from the road to the building entrance and driveway turning radii for larger employment complexes that accommodate buses.
- d. Look for opportunities for improvement in conjunction with new development, e.g., opportunities to negotiate additional right-of-way to improve alignment and widen shoulders.
- e. Enforce weight-restricted facilities to extend the service life of roads and bridges.

Land Use

- 14. Manage the location, intensity, character, and timing of land uses in ways that protect and complement existing neighborhoods, business districts, and agricultural activities, in conjunction with transportation and infrastructure investment.

Related programs and practices should:

- a. Interconnect neighborhoods with compatible adjacent uses, e.g., using bicycle and pedestrian paths.
- b. Protect established neighborhoods from the development of incompatible adjacent uses.
- c. Protect sensitive natural areas from harmful development impacts.
- d. Review zoning map and rezoning requests (approved and disapproved) in advance of the next comprehensive plan update.

This action plan presents recommendations to implement or fulfill the goals and objectives. The recommendations are based on the analysis in Chapter 3 and organized as follows:

Housing Actions	49
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Community Services and Facilities Actions.....	57

Implementation

Section 301(a)(4.2) of the Municipalities Planning Code requires that municipal comprehensive plans include a discussion of short- and long-range plan implementation strategies, which may include implications for capital improvements programming, new or updated development regulations, and identification of public funds potentially available. Resources for implementation are identified in the action plan tables below.

Housing Actions

- Become familiar with development approaches to housing in combination with development of commercial, institutional, and open space uses—specifically traditional neighborhood development and conservation by design.**

Specific Actions, Value, or Outcome

Visit nearby communities that have used these innovative approaches to residential use in south central Pennsylvania. Invite their developers and municipal staff to share the success and shortcomings of these projects. Seek to understand where they might be applicable or even permitted by right in lieu of conventional development in Lower Swatara Township.

Partners

Tri-County Regional Planning Commission for knowledge of innovative developments throughout the region and developer and municipal staff contacts.

Funding Sources

None for this informational activity.

Priority and Timing

High in advance of zoning ordinance and map revisions.

Land Use Actions

1. Update the Township zoning map to reflect the desired future land use pattern.

Specific Actions, Value, or Outcome

- a. Rezone the Williams Farm along the north side of Fulling Mill Road and the adjacent residentially zoned parcels along the west side of Longview Drive to neighborhood commercial at a depth consistent with the existing neighborhood commercial district on the east side of Nissley Drive and Hollywood Drive.
- b. Rezone the Williams parcel along the south side of Fulling Mill Road between Lumber Street and the existing Light Industrial Park district to neighborhood commercial.
- c. If economic or infrastructure conditions have change, reconsider land use/zoning alternatives for Areas 1, 2 and 4.

Partners

None.

Funding Sources

None, for so few changes.

Priority and Timing

High, to be completed within three years of plan adoption.

2. Provide educational opportunities for Township officials and staff to strengthen their knowledge and administration of effective zoning, development, stormwater management, and other regulations.

Specific Actions, Value, or Outcome

Township officials who approve development plans and Township staff who review them should be exposed to a variety of regulations, their administration and interpretation to further their understanding and ability to make informed decisions and suggestions for improvement.

Partners

None.

Funding Sources

None, for so few changes.

Priority and Timing

High, to be completed within three years of plan adoption.

3. **Continue to seek out willing property owners in flood-prone areas for voluntary buyouts.** Flood-prone areas include but are not limited to Jednota Flats, Lisa Lake, Swatara Road, and Lumber Street.

Specific Actions, Value, or Outcome:

Continue to identify county, state, and federal sources to fund voluntary buyouts.

Purchase land and property from willing landowners to reduce the risk of lost life and property and reduce costs of rescue and recovery. Demolish structures and restore land to an open condition. Look for opportunities to interconnect open spaces, e.g., Highspire's Reservoir Park.

Partners

Dauphin County, Pennsylvania Emergency Management Agency (PEMA), Federal Emergency Management Agency (FEMA), Pennsylvania Department of Conservation and Natural Resources, Manada Conservancy.

Funding Sources

Same as above.

Priority and Timing

Medium and with outreach to flood-prone property owners ongoing.

Transportation Actions

1. **Advocate that PennDOT improve the overall alignment of the PA 441 corridor.**

Specific Actions, Value, or Outcome:

As a state facility, improvement of the highway should be led by PennDOT. Future development of nearby parcels may contribute to specific design needs regarding traffic volumes and distribution as well as opportunities to acquire additional right-of-way to re-align hazardous segments.

Partners

Middletown, Penn State Harrisburg, and local businesses.

Funding Sources

Township only for advocacy.

Priority and Timing

Medium.

2. **Maintain the 5-year and 10-year road maintenance needs assessment as a programming and budgeting tool. Consider road conditions as well as safety among the needs transportation projects should address.**

Specific Actions, Value, or Outcome:

Maintain a ready list of transportation improvement needs and associated service costs (permitting, design, construction).

Partners

Tri-County Regional Planning Commission and Harrisburg Area Transportation Study for examples of other regional municipalities using capital improvement programs.

Funding Sources

Township; recommendation is for a traditional municipal planning activity.

Priority and Timing

High and ongoing.

3. **Budget the majority of annual transportation maintenance funds for road maintenance and repairs and budget a portion to 1) proactive road maintenance and 2) road safety improvements.**

Specific Actions, Value, or Outcome:

While assessing road conditions, look for safety improvements and small maintenance projects that will help to extend the lifecycle of the facility. Budget a minority of the annual maintenance funds for these proactive activities. Flex the funds if maintenance emergency repair costs are higher and reprogram the activities for the following year.

Partners

None.

Funding Sources

Township.

Priority and Timing

Medium and ongoing.

4. Review development proposals for opportunities to improve traffic flow, safety and emergency response and to interconnect neighborhoods and business centers with facilities for bicycle and pedestrian connectivity.

Specific Actions, Value, or Outcome:

Regarding traffic flow and emergency response, consider opportunities such as:

- a. Improve North Union Street; alignment, width, durability, lack of shoulder, and lack of bicycle-pedestrian facility are concerns.
- b. Extend Spring Garden Drive east to North Union Street potentially through the commercial highway district;
- c. Extend Lumber Street north to PA 441; also consider the alignment and stormwater management design so as not to exacerbate stormwater flow.
- d. Extend Hollywood Drive east to Nissley Drive through future development of the Williams Farm.
- e. Extend O-Hara Drive west to Longview Drive.

Regarding bicycle-pedestrian connections, in nearby Elizabethtown, North Lime Street and Hickory Lane are not bridged over Conoy Creek, however two small paved paths allow bicyclists and pedestrians to move across this green space between the neighborhoods on either side.

Partners

Developers.

Funding Sources

Developers and Township.

Priority and Timing

Medium and ongoing.

5. Support the addition of a Rosedale Avenue interchange.

Specific Actions, Value, or Outcome:

Expand access to the Airport Connector with a new full or half interchange, if/when feasible.

Partners

PennDOT, HIA.

Funding Sources

PennDOT, HIA, developers, and Township.

Priority and Timing

High and ongoing with interest from one or more developers and approval from PennDOT.

6. **Recommend or review improvement of North Union Street and Stoner Drive, when development proposals are submitted for adjacent properties.**

Specific Actions, Value, or Outcome:

Improvement of North Union Street and replacement of Stoner Drive.

Partners

Developers.

Funding Sources

Developers and Township, including possible use of transportation impact fee revenue.

Priority and Timing

Medium, weight-restrictions and enforcement will curtail truck use. Safety remains a concern for bicyclists and pedestrians along North Union Street.

7. **Become familiar enough with the Act 209 Traffic Impact Fee provisions to determine whether this is a planning tool Lower Swatara Township should enact.**

Specific Actions, Value, or Outcome:

Contact municipalities that use an Act 209 ordinance to learn about their experience with the system—their approaches, successes, and lessons learned. Evaluate and determine whether an Act 209 ordinance would be beneficial to the Township. If beneficial, develop and adopt a traffic impact fee ordinance.

Partners

Tri-County Regional Planning Commission for knowledge of innovative developments throughout the region and developer and municipal staff contacts.

Funding Sources

None for this informational activity.

Priority and Timing

High in advance of zoning ordinance update.

8. **Advocate and coordinate pedestrian connectivity from Penn State Harrisburg to Linden Center.**

Specific Actions, Value, or Outcome:

Participate in planning discussions to determine where and how to provide pedestrian connectivity.

Partners

Penn State Harrisburg, the Middletown Home, HIA and developers of the North 29 site, developers of Linden Center.

Funding Sources

Township for planning discussions; developers and possibly Township for improvements.

Priority and Timing

Medium and ongoing in conjunction with redevelopment of the PA 230 corridor and realignment of facilities on the Penn State Harrisburg campus.

9. **Review transportation improvement plans for bicycle and pedestrian facilities to support active and low-cost travel connections to parks and retail, service, and employment destinations.**

Specific Actions, Value, or Outcome:

Participate in planning discussions to determine where and how to provide bicycle-pedestrian connectivity, particularly along the roads and bridges over and under the Turnpike, PA 283, and Airport Connector (Lumber Street, Nissley Drive, Stoner Drive, and Spring Garden Drive).

Partners

PennDOT, Pennsylvania Turnpike Commission.

Funding Sources

Partners.

Priority and Timing

Medium and ongoing.

Water Utilities Actions

1. Update the Township's Act 537 Plan.

Specific Actions, Value, or Outcome:

Assess the condition of public sewer facilities. Assess the demand for public sewer service in terms of volume and location of future development. Assess private systems for functionality and groundwater protection. Plan for service area expansion in conjunction with land use planning and groundwater protection.

Partners

PA Department of Environmental Protection, Derry Township, Highspire Borough, Middletown Borough.

Funding Sources

PA Department of Environmental Protection.

Priority and Timing

High and beginning in 2016.

2. Update ordinances to remove development requirements and standards that negatively impact water quality and add those that positively impact water quality.

Specific Actions, Value, or Outcome:

Conduct administrative and enforcement practices to maintain compliance with current and future MS4 requirements.

Partners

None for regulatory updates.

Funding Sources

None.

Priority and Timing

High within three years (unless required sooner by PA DEP).

3. **Determine the need, and if needed, the value, for a municipal authority fee to property owners to fund management and maintenance of community stormwater facilities.**

Specific Actions, Value, or Outcome:

The Township has authorized the municipal authority with maintenance inspections and repair/improvement of public stormwater facilities in the Township. The costs of inspection and repair/improvement have not been estimated. Revenue will likely be needed to cover these service costs.

Partners

None.

Funding Sources

None for the decision on fee need or value.

Priority and Timing

High/Medium within 1-2 years.

Community Services and Facilities Actions

1. **Determine the Township's preference and basis for police services.**

Specific Actions, Value, or Outcome:

The Township should review this planning study and determine how police services are best provided for Township residents. Invite Township citizens to discuss support, concern, and questions about policing services. This could be done through a special meeting or workshop, or a dedicated agenda item spanning several regular Board meetings. A summary of comments could be posted on the Township website or otherwise made available as a record of this discussion and reference for Board decision-making. Additional study could be needed, if the Township is interested in a regional police service area that differs from those presented in the 2015 study.

Partners

Only if there is interest in a next phase of study for regional police services.

Funding Sources

Township for this policy decision; PA Department of Community and Economic Development for further study and consolidation assistance.

Priority and Timing

High; interest should be explored while the study is relatively current, followed by appropriate action.

2. Work with the Fire Department to explore volunteer retention and recruitment ideas.

Specific Actions, Value, or Outcome:

Exchange volunteer firefighter retention and recruitment ideas with other municipalities and departments.

If fire protection services are studied similar to police service regionalization, support Dauphin County in its leadership of a regional fire protection service study.

Partners

Dauphin County.

Funding Sources

Township and Fire Department; possibly grants for volunteer pilot retention and recruitment programs.

Priority and Timing

Medium and ongoing.

3. Memorial Park: Expand parking and add walking trail.

Specific Actions, Value, or Outcome:

Memorial Park is very busy during baseball season. Games on all three fields generate more park visitors and vehicles than the current parking lots accommodate. As a result, visitors park vehicles in the grass and along the street, the latter posing safety hazards.

Parking should be expanded. By how much? The Township and baseball league should work together to estimate the parking demand by reviewing the game schedule to determine how frequently multiple fields are in use and how many vehicles each game generates.

Parking expansion could occur through 1) replacement of existing facilities with an additional lot, 2) acquisition of additional land and construction of an additional lot, and/or 3) shared use of future parking that may be developed on adjacent property.

ADA-accessibility throughout the park should be evaluated.

Benefit: Public Safety

Costs: Land or easement acquisition; parking lot design and construction.

Memorial Park is large enough to accommodate a loop path that connects the various facilities and offers a good surface for walking for health and wellness. If the park is expanded, the walking path should also extend to the parking lot located there.

Benefit: Public Health

A walking path along the perimeter of Old Reliance park is another park

enhancement to consider. Streets within Old Reliance carry only low traffic volumes, but a walking path within the park would be truly separate from vehicular traffic hazards.

Partners

Baseball League.

Funding Sources

Township, PA Department of Conservation and Recreation.

Priority and Timing

High for safety of park visitors when parking.

4.

Greenfield Park: Convert lawn areas not used for soccer fields to meadow.

Specific Actions, Value, or Outcome:

Soccer fields aside, Greenfield Park consumes a significant amount of public works labor in maintaining the park lawn. Portions of park lawn are appropriate in areas around the concession stand, where game spectators are expected to sit, and around benches sited along the walking path. However, other areas could be planted or over-seeded with meadow species and left uncut for several weeks at a time. Seasonal mowing would be sufficient to keep saplings and brush from establishing. If one or more areas are desired as woodlands, mowing could be abandoned and the area would in time return to a woodland cover condition. Restrooms should also be considered.

Benefits: Reduces lawn maintenance costs; improves soil quality (composition, absorption); diversifies and enhances park as a natural area.

Partners

Soccer League, Dauphin County Conservation District, Dauphin County Parks and Recreation and/or Natural Lands Trust for suggestions on naturalized landscapes.

Funding Sources

Township, PA Department of Conservation and Recreation, Chesapeake Bay Foundation.

Priority and Timing

High to reduce maintenance costs and within 1-2 years.

5. Design and develop the Township land at 140 Fulling Mill Road as park with a water access to Swatara Creek.

Specific Actions, Value, or Outcome:

Now that the Township owns property along the Swatara Creek at the east end of Fulling Mill Road (river mile 37), this land is the most feasible location for a public water access (boat launch). Its use for other recreational facilities is limited due to its location in the 100-year floodplain. The Swatara Creek Water Trail guide labels the site as the “Clifton Covered Bridge Project” access point, and describes it as “a washed-out covered bridge planned for reproduction.” The nearest upstream access is at the Hanover St. Bridge & Hummel Nature Trail (river mile 28-29) and downstream, Middletown (river mile 42).

As a water access, the site should include a boat ramp, parking, and park signage with safety information and emergency contacts. To the greatest extent possible, the woodlands along the creek should be retained as a riparian (river) buffer to absorb floodwaters from the creek and stormwater from the site, including sediment and pollutants. The remaining portion of the site could be enhanced as a nature park with a walking path meandering through lawn, meadow and/or meadow-to-woodland areas. A pavilion with picnic benches, if able to be sited and secured from flood waters, would indicate the site as one of the Township’s parks.

Benefit: Public Recreation (access to public waters, nature park)

Partners

Swatara Creek Watershed Association, PA Fish and Boat Commission

Funding Sources

Township, PA Department of Conservation and Recreation, Chesapeake Bay Foundation.

Priority and Timing

Medium, within 5-7 years.

6. Develop a written policy for evaluating the costs and benefits of accepting parkland donations and purchase offers.

Specific Actions, Value, or Outcome:

Consider the following potential criteria:

- The need for additional or alternative facilities to meet residents' active and passive recreational needs. This would include the availability of desired facilities within the Middletown area and projections of facility needs, e.g., fields for community (team) sports, into the future. Sports clubs should be able to demonstrate trends in participation and project those trends in line with age- specific population trends.
- Land area and topographic parameters associated with recreational needs. Nature parks are most easily "developed" on sites with existing woodland and meadow landscapes; they are often more interesting with topography that creates varied microclimates and diverse vegetation. On the other hand, active parks developed with sports fields, courts, and the like require relatively flat land or terraced hills large enough to accommodate the facilities and the parking associated with sports and spectators.
- Unique site features. These include natural and cultural/historic resources that are connected to the Township's natural and cultural heritage and that distinguish property from any other in Pennsylvania.
- The long-term cost of additional parkland, including design, construction, and maintenance.

Partners

Tri-County Regional Planning Commission may know of other municipalities that have such criteria. Pennsylvania Department of Conservation and Natural Resources, Pennsylvania Recreation and Park Society, Manada Conservancy (for holding easements).

Funding Sources

Township.

Priority and Timing

Medium, within 5-7 years.

7. Survey residents for their interest in expanded recreation program opportunities.

Specific Actions, Value, or Outcome:

Consider a school district-wide survey that would provide service-area results to Olmsted Recreation and municipal-level results to Lower Swatara, Middletown, and Royalton. Municipal-level results will help the Township and Boroughs understand what facilities may need to be updated or replaced in support of desired programming. Where the results show common interests between Township and Borough residents, develop additional programs or partner with other (municipal) recreation departments to provide access to programs. For activities where there is only Township interest, consider whether a part-time recreation director/manager position is warranted.

Partners

Olmstead Regional Recreation Commission, Middletown Area School District, Middletown, Royalton.

Funding Sources

Partners, Pennsylvania Department of Conservation and Natural Resources, Pennsylvania Recreation and Park Society (RecTAP program grants).

Priority and Timing

Medium, within three years.

8. Work with Middletown on the planning and development of a trail along Swatara Creek.

Specific Actions, Value, or Outcome:

Become familiar with the trail development process from others in the Capital Region: how to explore potential trail locations, how to talk about trail benefits, how and when to approach property owners to request an easement for trail use, etc.

Partners

Middletown, Hummelstown, Middletown & Hummelstown Railroad, Swatara Creek Watershed Association, Manada Conservancy.

Funding Sources

Partners, PA Department of Conservation and Natural Resources.

Priority and Timing

Medium, beginning in 3-5 years.

Interrelationships

The Municipalities Planning Code (Section 301(a)(4.1)) requires that a comprehensive plan include a statement of the interrelationships among the various plan components.

This comprehensive plan makes few significant recommendations for change to community and economic development policy. The three land use recommendations are perhaps most notable. Future development of West Fulling Mill Road, for which two areas are recommended for rezoning, has ready access to water and sewer infrastructure. Transportation connections and improvements should consider providing and interconnecting multiple modes of travel. Access design should prioritize safety for the adjacent school and for the long-term character of a neighborhood commercial district. Internal street layout and design should balance needs for traffic calming and accommodation of delivery trucks and emergency response vehicles to and through the site. The Township may want to discuss pedestrian connectivity with TE Connectivity and its privately owned on-site trails. Stormwater management will also require careful design so that drainage and flooding is not compounded along Lumber Street.

Future development of the southeast quadrant of the PA 283 and North Union Street interchange will require a much larger investment in infrastructure – road, water, sewer, etc. – from the Township, the Township Authority, and private entities. Improvements to North Union Street should address the condition of the road for access as well as corridor use and development access for bicyclists and pedestrians. If the Act 537 Sewage Facilities Plan update determines there is a need for sewer extension to this area of the Township, development may help reduce the cost to Township taxpayers.) Other recommendations made in the plan are based on the intent to maintain or enhance the quality of life offered in the Township.

Compatibility

The Municipalities Planning Code (Section 301(a)(5)) requires that a comprehensive plan indicate that “the existing and proposed development of the municipality is compatible with the existing and proposed development and plans in contiguous portions of neighboring municipalities, or a statement indicating measures which have been taken to provide buffers or other transitional devices between disparate uses...”

This comprehensive plan considered several changes to Township land use policy and zoning. The few recommended changes are internal to the Township, not located adjacent to nor expected to have any notable effect on other municipalities.

Other land use changes considered during the plan’s development, should they be acted upon in the coming years, are also located internal to the Township.

Consistency

The Municipalities Planning Code (Section 301(a)(5)) also requires that a comprehensive plan indicate that “the existing and proposed development of the municipality is generally consistent with the objectives and plans of the county comprehensive plan.”

Dauphin County updated its Comprehensive Plan in July 2017. The plan places a high value on the quality of life that residents enjoy, as noted in the county’s community survey, and continues smart growth policies that manage development. The plan presents goals and actions for planned or managed growth in three focus areas:

- Growing Our Communities, which addresses land use (as sustainable development), housing, and public facilities & services. These policies promote development, fair and affordable housing choice, and appropriate emergency, education, recreation and wellness services within community service areas (defined below).
- Growing Within Our Environment, which addresses water quality & stormwater management, floodplain & riparian area preservation, and agriculture & resource protection. These policies promote water quality protection, flood risk reduction and other hazard mitigation, and agricultural, historic and cultural resource protection.
- Growing Our Economy, which addresses economic development, transportation, and water and sewer infrastructure. These policies promote economic growth near existing development areas, including downtowns and office/commercial/industrial centers; transportation improvements for safety, for all modes that moves people and goods, and for persons with disabilities; and planning for infrastructure and utilities.

The policy intent of the county’s planning goals is unchanged from its 2008 plan, though the wording has been updated. Lower Swatara Township’s development policies in its comprehensive plan are generally consistent with those of Dauphin County.

In lieu of a conventional future land use plan and map, the plan references community service areas or CSAs as the distinguishing feature that should guide the location of most future development in Dauphin County. CSAs are the existing geographic areas served by water and/or sewer infrastructure and other public services, as defined in the Regional Growth Management Plan (RGMP).

The RGMP also designates planned growth areas. Planned growth areas distinguish preferred growth areas based on existing development density, the availability of public facilities/utilities, and character. In Lower Swatara Township, the RGMP designates urban core (for existing higher density development, redevelopment and infill) and rural reserve (for future growth and potential expansion of CSAs). The most rural portions of the

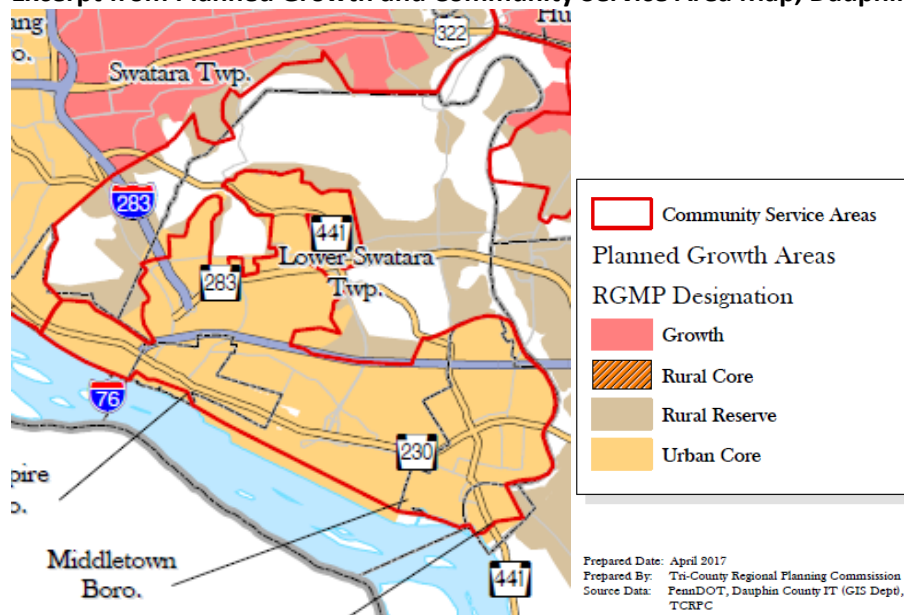
Township are designated as conservation, not designated for growth, though some very low density, low intensity development may occur. A draft RGMP update has been prepared as of July 2017 and is under review. Planned growth areas in Lower Swatara Township are unchanged in the draft update.

The planned growth areas are approximately consistent with Lower Swatara Township's future land use map, which relies heavily on its zoning map. Minor differences include:

- Small areas of the rural reserve designation that have already been developed for residential, commercial and industrial uses, and
- Small areas adjacent to the rural reserve that are zoned by the Township for residential or potential residential development (i.e., residential agricultural).
- Township zoning for commercial development south of PA 283 (the Shope Farm) and recommended commercial zoning along Fulling Mill Road (the Williams Farm), both of which can be considered infill in the context of adjacent planned growth areas.

These differences are explained by the fact that the Township's Future Land Use Map is parcel-based and the county's map is based on natural resource and infrastructure data. Compare the excerpt from the Planned Growth and Community Service Area Map (see figure below) to the Township's Future Land Use Map in the appendix.

Excerpt from Planned Growth and Community Service Area Map, Dauphin County, 2017



The Dauphin County Planning Commission (DCPC) has established a subcommittee for each of the focus areas. The subcommittees will meet to review implementing actions and make adjustments as conditions change. These activities will be documented as they occur.

The plan, its maps, its preparation resources, and its implementation status as it emerges are available online at <https://www.dauphincountycompplan.org/>.

Plan Review, Updates and Renewal

The Comprehensive Plan will be most meaningful if its recommendations are implemented, conditions are re-evaluated and the plan is updated to reflect additional policy/regulatory, infrastructure or other efforts to address community development concerns. For this to occur, it is recommended that the Township Planning Commission perform the following actions:

- Prepare an annual written report summarizing the past year's implementation activities and outcomes achieved, upcoming implementation activities, and crucial issues that will, or may, impact the Township. Submit the annual report to the Board of Commissioners and share with local media for public awareness.
- Evaluate the Comprehensive Plan every three to five years and, if necessary, propose modifications to the Board of Commissioners to ensure the plan remains useful regarding the future growth and preservation decisions in the Township. As recommendations are completed, the remaining recommendations may be reviewed, refined, and reprioritized.
- Upon 10 years, the Comprehensive plan must be reviewed per the Municipalities Planning Code (Section 301(c)). In rapidly growing planning areas, more frequent updates may be needed to maintain timely policies and priorities. In slow growing areas, a 10-year update of population, demographic, and socio-economic information that shows little or no change could provide the basis for re-adoption of the existing plan for another 10 years.

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Appendix A

Public Participation

Preparation of the comprehensive plan included opportunities for residents and officials to offer their ideas, concerns, and perspectives on the current state of the Township and its future opportunities and challenges. The public participation program included a Steering Committee, an online survey (also available in paper format), interviews with Commissioners and staff, additional outreach to external organizations and agencies, and an open house to present the draft plan for additional comments.

Overall Findings

1. Residents are opposed to more warehousing and the associated truck traffic and safety concerns along “local” roads. North Union Street, PA Route 441, and Rosedale Avenue were mentioned.
2. Residents view the local tax rate as high. Some distinguish school district taxes from Township taxes. Since local taxes are billed and collected together, the total rate is the easy comparison to make. The allocation among Township, county, and school district is not always examined.
3. Residents are interested in redevelopment of the PA Route 230 corridor.
4. Residents view Penn State Harrisburg as an asset with the potential to spur economic development.
5. Residents would like housing options for retirees and seniors in the Township.
6. Residents appreciate open space—land that is not developed for housing, business, or industry. This includes public parks, private farms, and private woodlands.
7. Residents appreciate parks and recreation services. They are interested in park improvements, such as equipment replacements and additions, and new amenities.
8. Residents would like walking/biking paths or trails in the Township. There is little to no interest in bike lanes on local roads.
9. Residents see a lack of safe, convenient sidewalks, especially between shopping areas and nearby neighborhoods.
10. Residents are interested in public transportation options.
11. Residents express a need to maintain infrastructure before building more.

Compiled Responses to Online Survey

Was also made available in paper format

What should change? What should stay the same? What's missing...in your local quality of life?

We're looking for meaningful ideas that will sustain or improve quality of life for business and residents. It's a 10-year plan, so think about big ideas that could really affect the Township and maybe its surrounding region.

- I appreciate the need for ball fields but there are too few park areas for other outdoor activities.
- We don't need more truck traffic and warehouses. (3)
- More focus on **improving land that has already been developed** instead of taking away even more undeveloped land. For example, **the 230 corridor between Highspire and Middletown** is a complete eyesore. It would be nice to have more local retail shops, restaurants, etc. in that area instead of vacant parking lots and dilapidated buildings. Some progress has been made but much of the development has been stagnant for many years now.
- **Strites Orchard** is one of the best things about living here. I wonder if there was a way to help them advertise to people that are just passing through since their success translates into jobs for the township.
- **Sidewalk infrastructure**
 - that provides safe walking (instead of driving) **to local convenience stores, shopping areas, and local restaurants**, i.e., Sharp Shopper/CVS area, Turkey Hill and Highspire restaurants, and Souders/Dairy Queen. Perhaps these businesses could be encouraged to assist with the expense in exchange for the added foot traffic to their establishments.
 - **between developments** are many times incomplete or missing entirely.
- **Public transportation** seems to be lacking in most of the suburbs of Harrisburg. There are a few buses that run here and there but no routes that run in the township except the airport.
- We need to **preserve our open space**. No more trucks, we have enough of them.
- I feel very strongly that we need to **preserve the farmland** that we have. No more trucking terminals/warehouses.
- We need to **preserve our open space**.
- We need **housing for the over 55 or retired group**.
- I would hope to see a better connection to Penn State Harrisburg as this branch campus continues to grow. **Great opportunity for Middletown/Lower Swatara to become a college town** which in turn can spur new local businesses and help current businesses attract new customers.
- We have the Swatara Creek. We have beautiful farmland that will be for sale. We need to take advantage of what is right here in Lower Swatara Township and

create more recreational areas for people to walk, bike, canoe, picnic, or have community events.

- One thing that needs to change is the **tractor trailer traffic on the east end of Rosedale Avenue**. Instead of turning onto Meade Ave from Rt 230 to go to the warehouses near Penn State campus, many of them are turning onto Rosedale from 230. The road is being destroyed and walking here is **extremely dangerous** with the addition of tractor trailers as well as extra Rosedale traffic that wants to avoid the red lights on Meade Ave at 230. The police told us they cannot do anything because it is a zoning issue. Between the extra traffic and now tractor trailer traffic as well, it is extremely **unsafe to try to walk at this end of Rosedale** and it was risky before all this started. There is no reason tractor trailers should be using this road unless they have a local delivery and that is not the case.
- We need to **improve our tax base**. LST has almost the highest taxes (all combined taxes, meaning total millage) of any township in the county. Compared to Swatara, Lower Paxton, Derry and Susquehanna, we are much too high with our taxes. Why? Look around, what do we have to generate tax revenue without increasing cost. Residential is fine but it doesn't pay for itself. Too many streets etc. to maintain, too many children to educate.
- Amen on the tax issues! We voted to eliminate the nuisance tax for higher tax rates and every year the tax we voted to abolish gets bigger. Kinda feel like we were baited and switched.
- **LST taxes are extremely HIGH compared to surrounding areas!** One of the highest! This is a major factor in the current real estate market values in LST. No question, we have many GREAT businesses/places to work right within our township - TYCO, Phoenix Contact, Fed Ex, etc. but do these employees choose to live in our township or elsewhere?? It would be beneficial to poll those who work at these businesses: do they commute to work and choose to live where it is more affordable? Look at the **average length of time for a home sale in LST, you will find it is incredibly long compared to other communities-** and it shouldn't be. It's the **taxes that are a big deterrent to bringing in new residents;** not the opportunity for work, the location, or the beauty of the area.
- Taxes lowered. Senior citizen center.
- Our family moved to LST in 1996. We love the area, its close proximity to major highways, its (as yet) uncongested roads, and its suburban/rural atmosphere. However, we have watched the **truck traffic increase quite a bit during the last 10 years** and feel that any more trucking companies would be a detriment. It certainly doesn't seem as though increasing the number of trucking companies would reduce our already very high taxes. I realize that some farm land may have to be used for other purposes but think **housing would be a better solution than trucking companies**. I travel 441 to work and often follow big trucks, sometimes the ones with two cars, trying to navigate the road. Why can't LST force them to use 283 and the interchange that we built for them!
- Let's **not have any more business which increase truck traffic**. We already have a serious **air quality/air pollution/air particulate issue** here. Let's not add any more!

- Other than Angie's and fast-food places, the **Township is devoid of restaurants**. Any action that would entice a higher level of eating establishment would be welcome.
- **Narrow roadway shoulders** leave no choice but for bicyclists to impede traffic in the travel lane.
- Our police to **patrol River Drive for speed violations**. This little sleepy street has become a race track.
- Instead of all these truck terminals, perhaps a good grocery store, which could still help with employment. Streets need repaving in Woodridge.
- On rentals, homeowners should be responsible for **maintaining property in acceptable/good condition**.

Is there a transportation project, a development, or an open space preservation effort that you believe should be accomplished in Lower Swatara Township in the next 10 years?

Share what project would make a difference in traffic flow, safety, new business opportunities, resource protection, or other meaningful benefit.

- **Sidewalk infrastructure**
 - Hoping that when the new **Nissley Drive bridge** over the turnpike is completed, there will be a sidewalk to safely cross over without walking in the traffic lane. (2)
 - For example, one could focus on roads like **Rosedale Avenue, North Union Street, Lumber Street, 441, Fulling Mill Road, and Spring Garden Dr.**
 - **on Rosedale from Lumber Street to 230**. There is a small area just before the sharp shopper over a bridge that has sidewalks and other sections here and there. I would suggest a completed sidewalk on Rose Garden.
 - Build a **pedestrian bridge across the Swatara Creek**.
- It would be good to **add bike paths/lanes** in the twp and to **have them tie into other bike paths with a pedestrian/bike bridge across the Swatara Creek**.
- I would also like to see more open space development for the community. I would love a **greenbelt walking/biking area** and a **community garden**.
- **More biking trails connecting to Harrisburg and Hershey**. Instead of more warehouses create a park along the Swatara Creek.
- Biking trails are fine but we need **road repair in Bryn Gweld** also. It hasn't been done for many years.
- **441 has become a major trucking route** between Fulling Mill Rd. and 283. Why, when there is an interchange named after Frank Linn that connects all of the major routes in and out of Harrisburg. When you see large semi-trucks going around the curves between Longview drive and Swatara St. It gives me the chills because sometime there will be a head on accident.

- **More policing on the trucks taking short cuts in local neighborhoods** where it is already posted. North Union is one of those streets. Every day large trucks come through.
- We need to keep a check with current **truck traffic along Fulling Mill and Oberlin Roads**. It has become an issue.
- It might help commuters if there was a route that ran down **Fulling Mill or Spring Garden into the city**. I know CAT is outside the township but maybe we could work with them to add a route.
- We need more **public transportation** in Middletown Borough and Lower Swatara Township. Penn State Harrisburg Campus continues to grow and students need transportation alternatives. Also, residents who are physically challenged would benefit with a centrally based public transportation system.
- Would like to see bus service in township.
- We do need **housing for the over 55 or retired group**.(2)
- It is nice so **many of the neighborhoods have swaths of green space** through them.
- As a senior citizen, I would like to see more information on **rides for the elderly** if one cannot drive anymore.
- Some sort of **transportation for senior citizens**, or CAT transportation for the area.

What park or parks do you and your household use most?

How often do you go? What facilities do you use? How many stars (out of 3) would you give each park? What does each park need to be more useful?

- **Shope's Garden (3)**
 - While the Township does a great job maintaining the grass and trash receptacles ... the **equipment is in need of repair/update**. Some investment in **tan bark replacement** would significantly help with poor drainage and weeds. Further, perhaps those utilizing the picnic areas could pay a small deposit fee, to be refunded **ONLY** after the event when trash is put into the proper receptacles and the site is restored to its original condition. Thanks.
- We use the park area around the high school and middle school (Greenfield Park). I would rate it only 2 stars but we use it regularly **for walking** since there are not enough other walking trails.
- I **do not currently use the parks** because we enjoy walking in wooded areas like a state park.
- I **don't use the parks**. I don't have small children and not yet a grandmother. I also hike a lot in state parks/forests. Once I have grandchildren, I would probably use the park in **Shopes Gardens** at the Lions Club building.
- I live in **Woodridge** and my children use the **neighborhood park** regularly. This playground is very active, especially during baseball season. As a "watchful" mom/parent, I would LOVE to see some benches placed around the perimeter of the playground so I could sit and still keep a close eye on my little ones. I think **MANY** other parents would support this too. Currently, you can only sit under

the pavilion for shade; but from there, you are out of sight from the swing area. A few other benches would be a GREAT addition!

- We use the **Old Reliance neighborhood park** when the grandkids visit. The basketball rims and backboards could use replacing. We've also used the **Memorial** tennis courts and the **Middletown HS** courts when they were available.
- The parks used most frequently by our family are the **Highspire Reservoir Park**, the **Swatara Township Schiavoni Park**, and the **Hummelstown Hummel Trail**. These parks allow a connection with the natural world and nature not available in any Lower Swatara Township Park.
- We have no occasions to go to a park.
- No bike lanes!! How about speed bumps on Woodridge Drive to present all this unnecessary speeding?

Are there other kinds of parks, recreation areas or public open space that Lower Swatara Township should have?

Walking and biking trails? Bike lanes on streets? More access points to Swatara Creek and/or the Susquehanna River? Where would you place these public spaces?

- **More biking and walking trails in the Township.**
 - Between communities, subdivisions, work areas and parks.
 - Along farmer's fields.
 - Too many street don't even have sidewalks. In my opinion, this is unacceptable for suburban area.
 - Too many sidewalks have overgrown shrubs and you can't even walk on them without getting into the streets.
 - That could connect to the Green Beltway in Harrisburg or to the Jonathan Eshenour Memorial Trail in Hummelstown/Hershey would be a big plus (2)
 - Along the Swatara Creek connecting to the Hummelstown trail (meet with M&H railroad to help with the easement issues)
 - Roughly parallel to I-283, US-283, the Turnpike or the Airport Connector.
 - That tie into other bike paths with a pedestrian/bike bridge across the Swatara Creek.
- Lower Swatara is a beautiful area to live. We need to continue to **preserve the farmlands** in LST to keep our township beautiful. Also a **"town square"** to help **identify LST**; perhaps located at a major intersection.
- **Parks concentrating on nature** and not athletics would be an asset to the Township. Additionally, parks that would allow dogs would be welcome. Control of dogs could be ensured by requiring dogs to be on a leash no longer than six feet in length, and assigning a significant fine (several hundred dollars) could reduce the failure of dog owners to collect dog waste.
- No hiking and especially bike.

Parks Planning Meeting and Survey

The Township Recreation Board held a public meeting on June 3, 2015, to solicit suggestions for park development and improvements. A survey was prepared for use at the meeting and made available on the Township's website. Results of the meeting were expected to help shape the parks and recreation element of the comprehensive plan and to program Township funds and grant opportunities for park improvements.

Public attendance at the meeting was light—only 15 in addition to Township Board members, Recreation Board members, and staff. Discussion was documented and one survey was completed. Results of the meeting and the survey are shown below.

As a result of the limited participation, two parks questions were included in the online survey for the comprehensive plan.

You and Your Township Parks

How far from your home	How you get there	How often you visit			How long you stay at each visit
		Spring	Summer	Fall	
Park: Shopes Garden					
<1/2 mile	Walk, 1	Daily	Daily	Daily	<1/2 hr
½-1 mile, 1	Bike, 1	Weekly, 1	Weekly, 1	Weekly, 1	½-1 hr, 1
1-3 miles	Drive	Monthly	Monthly	Monthly	1-2 hr
3+ miles	Other _____				>2 hr
Park: Kunkel Elementary					
<1/2 mile, 1	Walk, 1	Daily	Daily	Daily	<1/2 hr, 1
½-1 mile	Bike	Weekly	Weekly	Weekly	½-1 hr
1-3 miles	Drive	Monthly, 1	Monthly, 1	Monthly, 1	1-2 hr
3+ miles	Other _____				>2 hr

Your Activities At The Park

Park	What features you use most	What features you use least
Shopes	Playground, sandbox	Baby swings
Kunkel	Playground, fields	

Rate Each Park/Recreation Area

Park Name	★	★★	★★★	Why this rating?
Shopes			1	Close by, well-kept, not busy
Kunkel		1		Wish it had more

What Does Each Park/Recreation Area Need?

Greenfield	ADD:
	<ul style="list-style-type: none"> Additional parking for soccer games
Memorial Park	REPAIR/UPGRADE:
	<ul style="list-style-type: none"> Parking lot
	ADD:
	<ul style="list-style-type: none"> Accessible path from upper parking area to lower Walking/bike trail around park Concrete tables with checkerboards Concert in the park, plays, kids' events
Kunkel	

Market Street, near Highspire's Reservoir Park	REPAIR/UPGRADE: <ul style="list-style-type: none"> ▪ New playground ADD: <ul style="list-style-type: none"> ▪ Connection to Highspire's Reservoir Park ▪ Concrete tables with checkerboards
Shopes	FIX: <ul style="list-style-type: none"> ▪ Fencing ▪ Clean basketball court REPAIR/UPGRADE: <ul style="list-style-type: none"> ▪ Bigger slide ADD: <ul style="list-style-type: none"> ▪ Water fountain ▪ Rock climbing ▪ Sign against graffiti on pavilion and tables ▪ Concession stand ▪ Large shed with plumbing and electricity
Woodridge	ADD: <ul style="list-style-type: none"> ▪ Additional parking for baseball games
General/All	REPAIR/UPGRADE: <ul style="list-style-type: none"> ▪ Signage at each park, perhaps with a geo-cache; a potential Boy scout project ADD: <ul style="list-style-type: none"> ▪ Automated external defibrillator (AED) for ball fields ▪ Add bocce ball to a park (four horseshoe pits and bocce at Sunset Park, two bocce at Bressler) ▪ Concrete tables with checkerboards

What Other Kinds Of Parks, Recreation Areas or Public Open Spaces Should The Township Have?

Additional softball field

- Current field used at Glad Tidings has poor parking and small spectator area – safety concerns
- Softball field cut from high school project due to current funding
- Locate it at Greenfield? Partner with Middletown Area School District, Lower Swatara Township, and Lower Swatara Township Athletic Association on funding

Universal access to parks and facilities

- Handicapped parking spaces, accessible route to the fields and special seating (when and where provided)

Improved connectivity between parks and neighborhoods. Walking and biking trails? From where to where?

- Yes! Not sure where (maybe near Kunkel), but something like Tyco has would be wonderful!

- Rail with trail, e.g. a Middletown-Hummelstown Railroad trail or other heritage rail trail
- Greenwood Hills to Greenfield Park
- Require pedestrian/bicycle connectivity through the land development ordinance

New Park at Jednota Flats

- Utilize Hazard Mitigation Grant Program open space (properties acquired through the program) for passive recreation; purchase neighboring properties to fill in property gaps and develop park amenities on non-HMGP properties, keeping HMGP properties as open space

New Park Location Selection

- Need a Township destination park like George Park (Lower Paxton Township)
- Seek potential Township landowner interested in donating/selling land to Township
- Identify target properties to strategize ideal locations for future recreational use

Dog park

- Low priority

More access points to Swatara Creek? Where?

- East end of Fulling Mill Road

Bike lanes on the streets and roads? From where to where?

- No discussion/response.

More access points to the river? Where?

- No discussion/response.

Survey Comment

- By the way, my family loves the movie night every summer in the park – please continue this!

Interviews

Interviews were offered and conducted with the following Township officials and staff:

- Commissioners Thomas L. Mehaffie III, President; Jon G. Wilt, Vice President; Laddie J. Springer; Dominic D. DiFrancesco II
- Township Public Works Director, Dan Wagner
- Township Planning and Zoning Director, Robert Greene
- Police Chief, Richard Brandt
- Fire Chief, Chris DeHart

Planning Commission members participated directly in the Steering Committee and were not interviewed.

The following summarizes the opinions and perspectives shared during the interviews.

What do you like (or in what ways do you brag) about Lower Swatara Township?

- Location and climate; seasons.
- Stability, safety.
- Natural beauty.
- Diversity across the community; the Township has farmland, residential neighborhoods, business centers, and parks.
- Parks.
- Professional Township staff.

How should the Township be better or different in 2025? What opportunities should be pursued?

- Residential growth
- Quality housing for retirees. Current housing has a range but misses housing options for retirees.
- Responsible growth that respects residents and their neighborhoods.
- Balance community (residential) and economic (commercial/industrial) development.
- Good economic projects, including high end retail.
- Value-adding economic development for the PA 230 corridor. An economic vision and plan should include Penn State-Harrisburg (as an economic asset and as a market of faculty, staff, and students) and the airport; quality services (not just dollar store, fast food) to attract a professional office/business park; a conference center (hotel and services) near the airport along PA 230.
- Development, associated transportation improvements, and water/sewer extensions along N Union could improve travel safety, emergency response times, and utility availability for future development
- Existing development in flood zones needs to be removed and restored as open space
- Address transportation safety, e.g. pedestrian and truck use of North Union Street, dog-leg on PA Route 441.
- Ensure access to and development opportunities for health care and ambulance service.

- Existing infrastructure must be maintained – cleaned, inspected/evaluated, and fixed, replaced, and/or upgraded – to maximize the lifecycle of each facility before constructing new facilities.
- Develop parks and recreational facilities for sports
- Stabilize quality of police service in the area.
- Parks can support greater use by residents and community events; parks need better marketing.
- Trails that connect everything – residential neighborhoods, corporate campuses, parks, schools, etc.
- Communicate, invite input, and work closer with adjacent municipalities, Dauphin County, and the Middletown Area school district.
- Strengthen effective communications with residents.

Concerns and Barriers to a better Township in 2025

- Retail can be a burden on police.
- Growth will increase infrastructure maintenance demands.
- School district value for tax influences property values and is a barrier to residential growth. A new school board was elected in November 2015.
- Little to no capacity for student enrollment growth in current school district facilities.
- Potentially more student housing in the area.
- Stormwater will require fees for maintenance of community facilities.
- Lack of consensus among citizens on future land use.
- Volunteer fire fighters are declining number. Paid fire fighters may be needed within 5 years to maintain current levels of fire protection.
- More parks will mean loss of taxable land revenue and more maintenance demands.
- Funding. There will never be enough money to do it all. The Township needs to spend wisely.
- Effects (burdens) of state and federal policy on local government.
- Lack of services (providers) for some desired uses, e.g. retirement housing
- Sewer treatment capacity controlled by other municipal treatment plants

Additional Outreach

The following agencies were contacted throughout the planning process for their perspectives on future community, economic, and recreational development in the Township.

- Susquehanna Area Regional Airport Authority
- Penn State Harrisburg
- Agricultural land owners
- Highspire Borough, Manager
- Middletown Borough, Manager
- Manada Conservancy
- Dauphin County Office of Economic Development
- Hershey-Harrisburg Regional Visitors Bureau
- Dauphin County Conservation District
- Dauphin County Planning Commission/Tri-County Regional Planning Commission

Open House

Lower Swatara Township hosted an open house to share the draft recommendations of the comprehensive plan update on April 7, 2016. The open house was held at the Lower Swatara Township Volunteer Fire Department.

Planning consultants Michelle Brummer of Gannett Fleming and Erin Letavic and Chris Bauer of HRG overviewed the plan update and its draft recommendations. The 64 attendees were able to view and comment on the draft recommendations at several exhibit stations before and after the presentation. A feedback form was available for attendees to indicate their support and comments on each draft recommendation.

General Questions

1. **Have costs been prepared for each of the draft recommendations? Costs and the impact to property taxes would help citizens to prioritize these items.**

No cost estimates have been prepared.

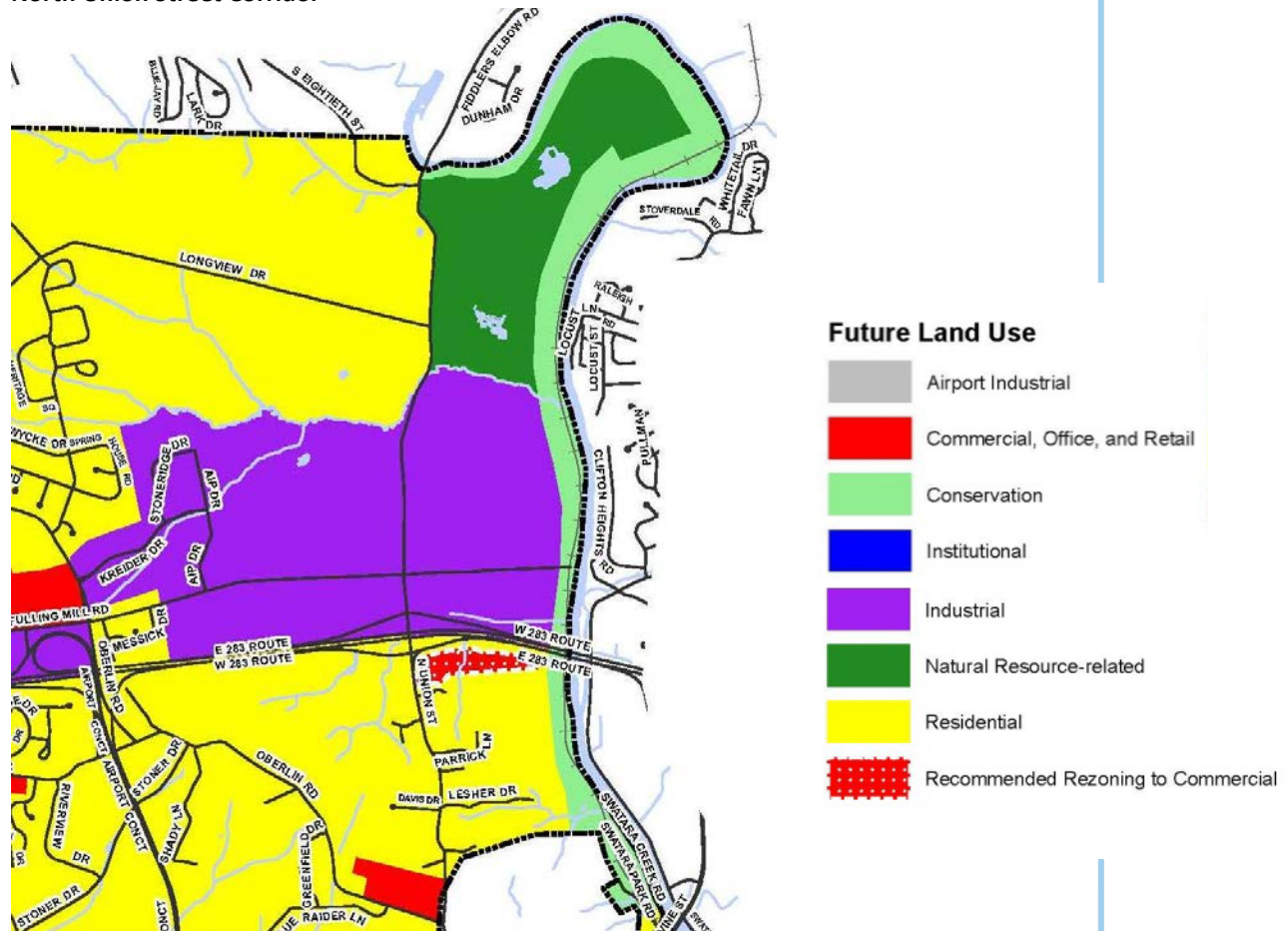
2. **Are there recommendations for senior housing?**

No, there are no recommendations specific to senior housing. One long-standing senior housing project to be located at the corner of Fulling Mill Road and Nissley Drive is moving toward approval and construction.

3. **Were there business representatives on the Steering Committee? Yes.**

Draft Future Land Use Map Comments

North Union Street Corridor



10. Map note: No more warehouses!!!
11. Map note: (what about) Ag?
12. Map note: No rezoning on North Union.
13. Map note: Too much traffic on 441 for trucks.
14. Map note: Creekfront rail trail?
15. Dickerson rezoning request has been withdrawn.
16. Asked how the recommendation came to be part of the comprehensive plan discussion. Expressed opposition to the recommended commercial zoning for the southeast quadrant of the PA 283 interchange. Also, the most recent FedEx building casts light pollution. Are there lighting performance standards in the Township ordinance? Why aren't buffers blocking the light?
17. If North Union Street (north of Fulling Mill Road) were zoned industrial,
 - driveways could be designed to direct traffic to the south
 - landowners may be willing to establish an open space buffer, e.g. for parks/recreation or as a natural area, to shield views of warehousing rooftops.
 The cost of building structures on sinkhole-prone lands is carried by the owner/developer, not the Township. Structures have been built on sinkhole-prone lands elsewhere in the Township.

Transportation Comments

18. Need to consider exit from Airport Connector to Fulling Mill Road.
19. Need to consider entrance to Airport Connector from Spring Garden Drive.
20. Sidewalk on bridges and under bridges.
21. Plan for sidewalk on one side (in) SALDO reviews.
22. Reconstruction of North Union should be a priority.
23. 3 comments confirmed support for reconstruction of the Fulling Mill Road bridge.
24. Extend Lumber to PA 441.

Utilities

25. *Map note:* Strites Road – water and sewer - no

Draft Recommendations Feedback Form

Six feedback forms were turned in at the open house. Results are tallied below and comments are noted.

	This recommended action is		
	Very Important	Important	Not Needed
	# of 6 responses		
Land Use, Zoning and Housing			
1. Become familiar with innovative approaches to residential use in combination with commercial, institutional, and open space uses. Comments <ul style="list-style-type: none"> • <i>The last thing we need are more warehouses!</i> • combination 	2	2	
2. Update the Township zoning map to reflect the desired future land use pattern. Comments <ul style="list-style-type: none"> • <i>Take a proactive approach to redevelop vacant properties to attract businesses (e.g. Jednota)</i> 	1	3	
3. Continue to seek out willing property owners in flood-prone areas for voluntary buyouts. Flood-prone areas include but are not limited to Jednota Flats, Lisa Lake, Swatara Road, and Lumber Street.		3	
	# of 6 responses		
Transportation			
4. Advocate that PennDOT improve the overall alignment of the PA 441 corridor.	1	2	

	This recommended action is		
	Very Important	Important	Not Needed
5. Maintain the 5-year and 10-year road maintenance needs assessment as a programming and budgeting tool. Consider road conditions as well as safety among the needs transportation projects should address.		4	
6. Budget the majority of annual transportation maintenance funds for road maintenance and repairs and budget a portion to 1) proactive road maintenance and 2) road safety improvements.	1	2	
7. Review development proposals for opportunities to improve traffic flow and emergency response and to interconnect neighborhood streets with trails for bicycle and pedestrian connectivity.		2	1
8. Support the addition of a Rosedale Avenue interchange, if/when feasible.	1	1	1
9. Recommend or review improvement of North Union Street and Stoner Drive, when development proposals are submitted for adjacent properties. Comments • <i>North Union does not need more “development”.</i>	1	2	
10. Become familiar enough with the Act 203 Traffic Impact Fee provisions to determine if this is a planning tool Lower Swatara Township should enact.		1	1
11. Advocate and coordinate pedestrian connectivity from Penn State Harrisburg to Linden Center.		2	
12. Review transportation improvement plans for bicycle and pedestrian facilities along the roads and bridges over and under the Turnpike, PA 283, and Airport Connector to support active and low-cost travel connections to parks and retail, service, and employment destinations.		2	1
Water, Sewer, and Stormwater Utilities			
13. Update the Township’s Act 537 Plan that defines service areas and protects groundwater.		1	1
	# of 6 responses		
14. Update ordinances to remove development requirements and standards that negatively impact water quality and add those that positively impact water quality. Comments • <i>Work with property owners, not against them.</i>		3	

	This recommended action is		
	Very Important	Important	Not Needed
15. Determine the need, and if needed, the value, of a municipal authority fee to fund management and maintenance of community stormwater facilities.			2
Township and Community Services			
16. Determine the Township's preference and basis for police services. Comments <ul style="list-style-type: none"> • Retain excellent local LST police service • Merge with regional 100% in agreement not only salaries it is pensions and health care coverage! Please allow this to go forward for the tax payers! • Twp should consider and advocate for walking w/ neighboring municipalities to reduce duplication of services (police, fire, public works) 	3	2	
17. Work with the Fire Department to explore volunteer retention and recruitment ideas. Comments <ul style="list-style-type: none"> • Department is affected by lack of residential growth. 	1	3	1
18. Memorial Park: Expand parking and add walking trail.		2	
19. Greenfield Park: Convert lawn areas not used for soccer fields to meadow.		2	1
20. Design and develop the Township land at 140 Fulling Mill Road as park with a water access to Swatara Creek. Comments <ul style="list-style-type: none"> • This would be great! 	1	3	
21. Develop a written policy for evaluating the costs and benefits of accepting parkland donations and purchase offers.		2	
22. Survey residents for their interest in expanded recreation program opportunities.		1	1
23. Work with Middletown on the planning and development of a trail along Swatara Creek.	1	1	1

Other Suggested Recommendations

24. ADA/seniors accommodations for pathways, trails, amphitheater
25. Work with Airport Authority to develop unused land along the 230 corridor.
26. Vision – MASD – What are we doing to hold MASD accountable? Test scores are lower than in some neighboring districts and due to this rating and performance, makes the township less desirable to live in.

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Appendix B

Background Studies

B1 Natural Resources

B2 Population

B3 Housing

B4 Economy

B5 Cultural Resources

B6 Land Use and Development

B7 Transportation

B8 Water Utilities

B9 Community Facilities and Services

The identification characterization of natural resources is important to planning, because natural resources perform vital environmental functions and are costly to disregard. This inventory of land, water and living resources characterizes opportunities and constraints to development so that future development in the Lower Swatara Township takes place in an environmentally sensitive manner. Map graphics within are excerpted from the 2008 Dauphin County Comprehensive Plan.

Geology and Groundwater

Underlying geologic formations shape the Township's topography and determine its slope, soil and groundwater characteristics. Physical factors such as rock type, porosity (open spaces within the rock) and permeability (ease of fluids moving through the rock) affect groundwater movement and availability. Bedrock chemistry influences groundwater quality and hardness.

Local geology comprises eight distinct formations. See Figure 1-1 for locations and Table 1-1 for features. The formations vary widely in their porosity and permeability. Most formations are difficult to excavate.

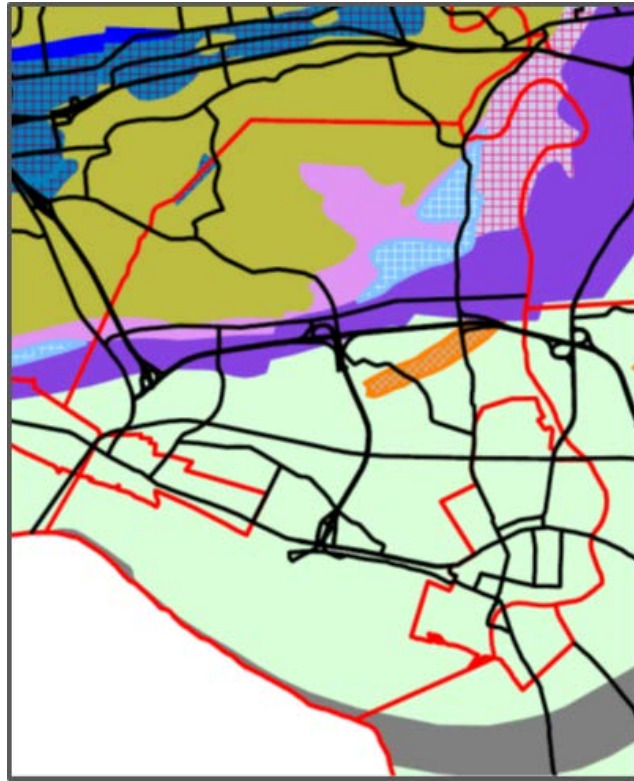










Figure 1-1 Excerpt from Map 3-1 Geology, Dauphin County Comprehensive Plan, 2008

Table 1-1 Engineering Characteristics of Geologic Formations

Formation	Secondary Porosity	Permeability	Ease of Excavation	Foundation Stability	Groundwater
 Annville – limestone	Moderate to high	Low	Difficult	Good	Large to very large
 Diabase	Very low	Low	Difficult	Good	5 gal/min
 Epler – limestone-dolomite	Low to medium	Low	Difficult	Good	15 gal/min
 Gettysburg – sandstone	Moderate	Moderate	Moderately easy to difficult	Good	66 gal/min
 Gettysburg Conglomerate – quartz	Low	Low	Difficult	Good	11 gal/min
 Hamburg Sequence – shale	Moderate	Very high in solution openings	Moderately easy to difficult	Good	10-50 gal/min
 Hershey and Mysertown – limestone-dolomite	Low	Low to moderate	Moderately easy	Good	25 gal/min
 Ontelaunee - dolomite	Moderate to high	High	Difficult	Good	200-500 gal/min

Source: Environmental Geology Report 1: Engineering Characteristics of the Rocks of Pennsylvania, Pennsylvania Department of Environmental Resources, 1982.

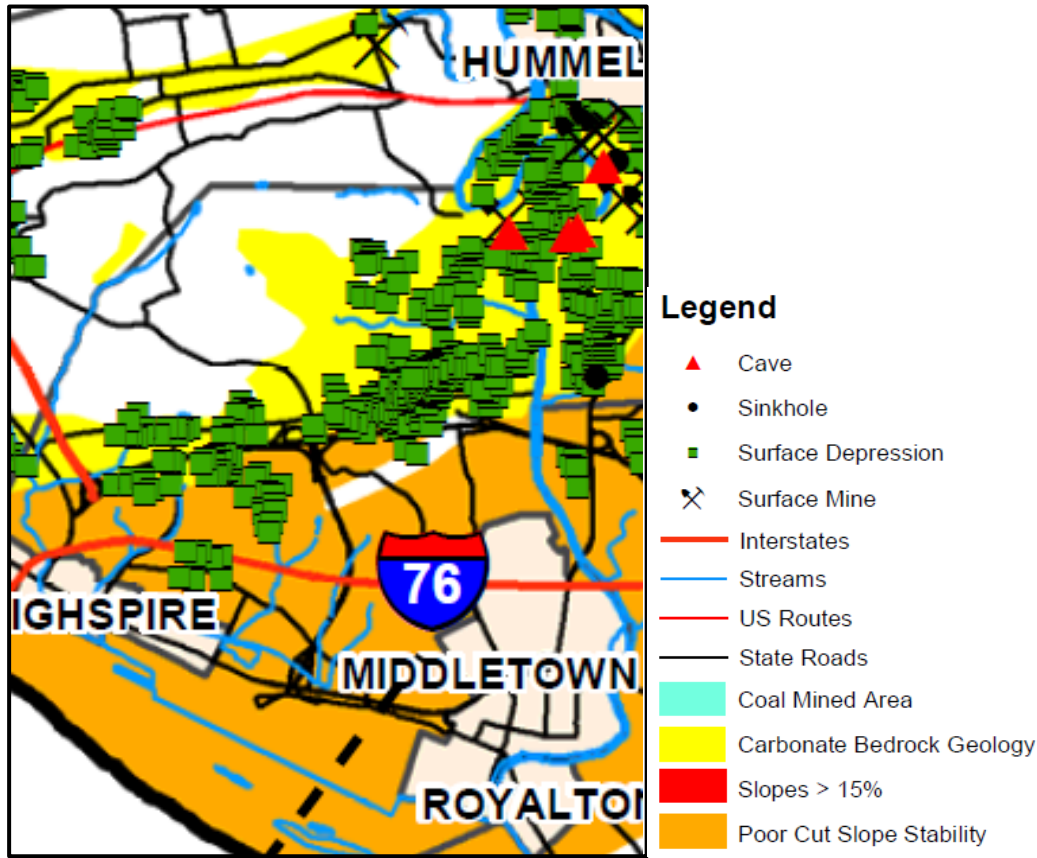


Figure 1-2 Excerpt of Figure 2-9 Geologic Hazards of the Dauphin County Hazard Vulnerability Assessment and Mitigation Plan

All provide good foundational stability for structures though the Gettysburg formation (south of PA 283) has poor stability as a cut slope. Diabase has the lowest groundwater yield, but this has little effect on development potential since this formation generally underlines the airport.

The limestone formations can provide stone suitable for quarrying and are also prone to sinkholes, surface depressions and caverns. See Figure 1-2 for known locations. Lands near Fiddlers Elbow are in fact quarried, while others underlain by limestone formations have been developed for residential, commercial and industrial uses. As of 2010, the Dauphin County Hazard Mitigation Plan estimates that 435 existing structures in the Township could be affected by land subsidence.

Implications

- Local geology is a limitation to development primarily in that it may be costly to excavate or to reinforce foundations in areas of carbonate geology, which have the potential to develop sinkholes, surface depressions, and caverns.
- Poor cut slope stability south of PA 283.
- Groundwater yields are not a limitation to development.
- Limestone formations pose some cost and/or risk for development.

Steep Slopes

Slopes with grades of 15 percent or greater are considered steep by most municipal planning standards. Slopes with grades over 25 percent are considered very steep. When disturbed, these slopes are prone to higher erosion rates that can yield greater sediment loads in streams.

Steep slopes in the Township are illustrated in Figure 1-3.

Steep slopes (≥ 15 percent) are found on Chambers Hill, along Swatara Creek and along North Union Street just south of PA 283. These areas total 306 acres (or 3.8 percent) of the Township. Development in these areas has been minimal due to the natural constraint of nearby floodplains and to the high cost of extending infrastructure to these areas.

Implications

- Disturbance of steep slopes should be minimized and managed to protect water quality.

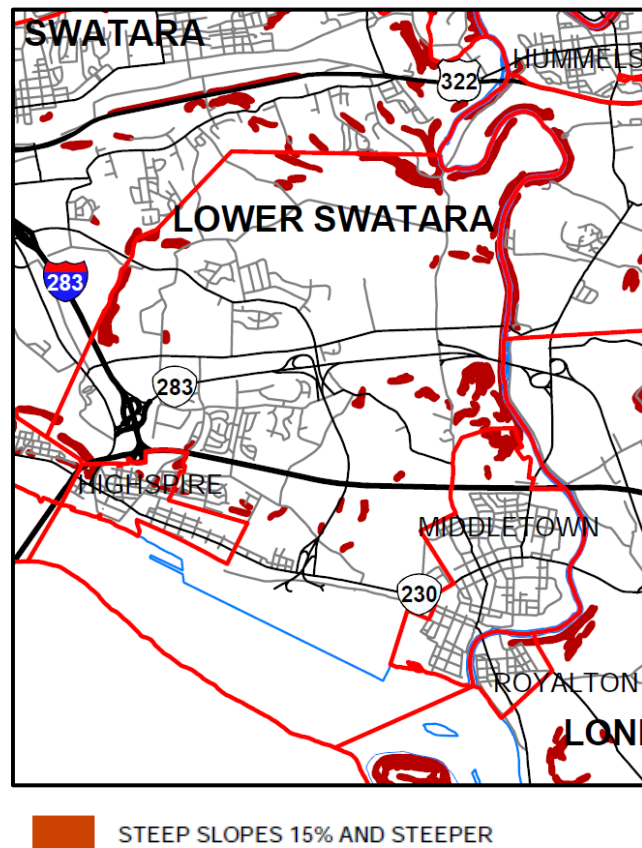


Figure 1-3 Excerpt from Map 3-4 Steep Slopes, Dauphin County Comprehensive Plan, 2008

Soils

The *Soil Survey of Dauphin County, Pennsylvania* (1986) describes the soil classifications found across the county. Soil types are unique in its origin, structure, texture, and composition. Soil associations are soil types that are commonly found together across a given land area and describe how soil depth, slope, and drainage affect potential land use. The soils associations found in the Township are mapped in Figure 1-4 and characterized in Table 1-2.

According to the Soil Survey, four soil associations are found in Lower Swatara Township. All are characterized by deep and well-drained soils over nearly level to moderate slopes. Flooding occurs primarily in the southern portion of the Township and along the creek, though this has not precluded development. A shallow depth to bedrock beneath the Berks-Bedington-Weikert soils in the northwest portion of the Township may limit or add cost to excavation.

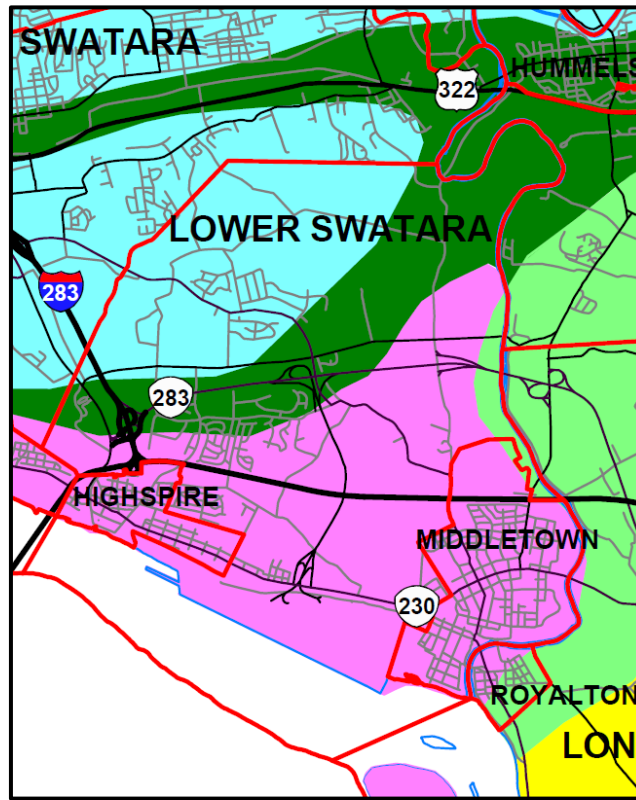






Figure 1-4 Excerpt from Map 3-5 Soils, Dauphin County Comprehensive Plan, 2008

Table 1-2 Soil Associations in Lower Swatara Township

Soil Association	Description	Depth to bedrock, material	Limitations to development
 Berks-Bedington-Weikert	Deep to shallow, well drained, nearly level to steep	10" to 20" to shale and 3.5' to 8' to sandstone	Depth to bedrock
 Hagerstown-Duffield	Deep, well drained, nearly level to gently sloping	4' to 12' to limestone	None
 Lewisberry Neshaming	Deep and moderately deep, well drained, gently sloping and sloping	42" to 48" to shale and sandstone	None
 Duncannon-Chavies-Tioga	Deep, well drained, nearly level to gently sloping	3' to 8' to alluvial deposits	Flooding

Source: Soil Survey of Dauphin County, 1972

Agricultural Soils

Prime farmland, as defined by the U.S. Department of Agriculture (USDA), is the land that is best suited for crop production. It has the soil quality, growing season, and water supply needed to economically produce a sustained high yield of crops when it is managed using acceptable farming methods. According to the USDA, prime farmland soils are usually classified as capability Class I or II of the eight classifications.

In many cases, agricultural soils are designated without consideration for existing development. While there are over 4,100 acres (50.8 percent) of agricultural soils in the Township, more than half of this land is covered by development, not farmed. The percentage of agricultural soils in open space areas is 1,792 acres (22.2 percent). Important agricultural soils are shown in Figure 1-5.

Other Environmentally Sensitive Soils

Highly erodible soils are typically found on steep slopes. These soils are unstable under conditions of disturbance and pressure and easily contribute sediment to surface waters. Vegetative cover can provide a first line of defense against erosion. Most steep slopes in the Township are currently wooded.

Hydric soils are soils that retain water during a portion of the year. They provide water storage and infiltration to groundwater below the surface. These soils are susceptible to compaction and uneven settling when disturbed. The Township contains 170.8 acres (or 2.1 percent of the Township's land area) as hydric soils. Most hydric soils are encompassed by wetlands, which are federally regulated.

Implications

- Soils in the northern portion of the Township are well-suited to crop production and presently are farmed. Yet, these soils lie close to the developed and developing areas and local farmers have not sought to preserve these farmlands.
- Steep slopes should not be disturbed; if disturbance or development is permitted, impacts should be minimized and managed until the new slopes are stabilized.

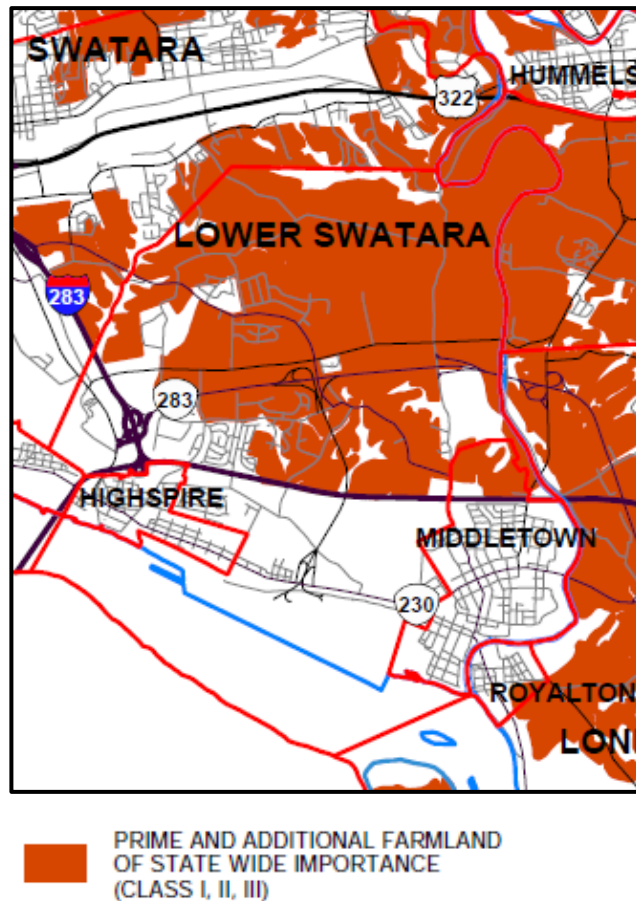


Figure 1-5 Excerpt from Map 3-6 Important Farmlands, Dauphin County Comprehensive Plan, 2008

Surface Waters

Local topography drains surface waters toward either the Susquehanna River or Swatara Creek, a river tributary. These watersheds are illustrated in See Figure 1-6.

Surface waters include rivers, creeks and streams, and ponds. They provide aquatic habitat, carry or hold runoff from storms, provide sources of drinking water, carry treated wastewater, and provide recreation and scenic opportunities.

The Swatara Creek watershed begins near Tremont in Schuylkill County and enters the Susquehanna River nearly 72 miles downstream at Middletown. The drainage area includes 571 square miles spanning four counties. Four small tributaries to Swatara Creek drain the eastern portions of the Township.

Three tributaries to the Susquehanna River drain the western half of the Township. Laurel Run originates in the vicinity of Strites Farm on Chambers Hill and flows southwest through Highspire. Agriculture and residential development comprise the majority of land use by area, however some commercial, industrial, and transportation uses are present. Surd Run flows along Lumber Street, draining the Williams Farm, approximately half of the Shapes Gardens development, the Turnpike interchange area, and the southern region of the Rosedale subdivision. Post Run drains the south central portion of the Township and is piped under PA 230 to reach the river. Historically, heavy rainfall events have resulted in flooding in the Post Run watershed.

Surface Water Quality

The Pennsylvania Chapter 93 Water Quality Standards classify surface waters according to their water quality criteria and protected water uses. Swatara Creek and Laurel Run are classified as warm water fisheries in Lower Swatara Township.

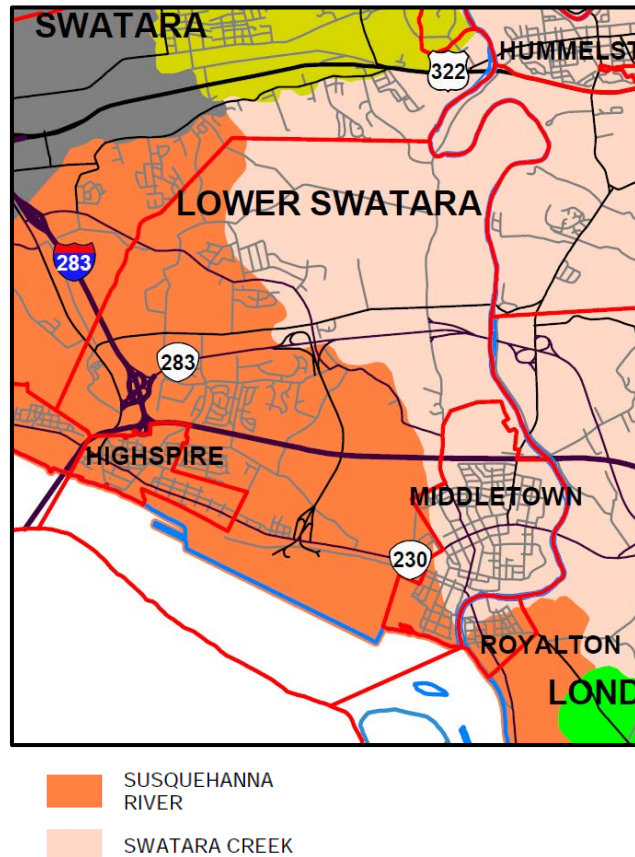


Figure 1-6 Excerpt from Map 3-2 Watersheds, Dauphin County Comprehensive Plan, 2008

Floodplains

Floodplain areas perform critical ecologic functions. They absorb, store, and release large amounts of water to the surrounding soils and groundwater systems. Their natural vegetation helps to filter excess nutrients from runoff, stabilize stream banks, and reduce soil erosion. Floodplains also provide habitat for terrestrial wildlife and influence stream conditions for aquatic life. Restricting new development from the floodplain helps to preserve these functions and reduces the threat to human life and property caused by periodic flooding.

For regulatory purposes, a floodplain is defined by the base flood, which has a predicted one percent chance of being equaled or exceeded in a given year; the often cited “100-year flood” is a misnomer. The floodplain boundaries for Lower Swatara Township are shown in Figure 1-7.

Approximately 496.5 acres (6.1 percent) of the Township lie in the floodplain. Flooding is the most frequent and widespread natural hazard for the Township.

The Pennsylvania Floodplain Management Act (Act 166 of 1978) requires municipalities that have been identified as flood-prone to enact floodplain regulations that, at a minimum, meet the requirements of the National Flood Insurance Program (NFIP). The NFIP is a federal program that allows property owners in participating communities to purchase insurance protection against losses from flooding. Lower Swatara has participated in the NFIP since 1977.

The [NFIP Community Rating System](#) (CRS) encourage community floodplain management activities that exceed the minimum NFIP standards. Under the CRS, flood insurance premium rates are adjusted to reflect the reduced flood risk resulting from community activities that: (1) reduce flood losses, (2) facilitate accurate insurance rating, and (3) promote the awareness of flood insurance. The Township currently does not participate in the CRS.

The Code of Ordinances of Lower Swatara Township restricts new development in the floodplain areas. However, much of the floodplain was developed before these regulations were in place; 140 structures are at risk. Dam failure, also results in flooding, would likely affect 71 existing structures in the Township. The Dauphin County Hazard Mitigation Plan reports 53 flood loss claims and total claims payments of \$489,970 to date. Five repetitive loss properties (for which 2 or more flood insurance claims have been paid for more than \$1,000 in a 10-year period) have reported 12 losses.

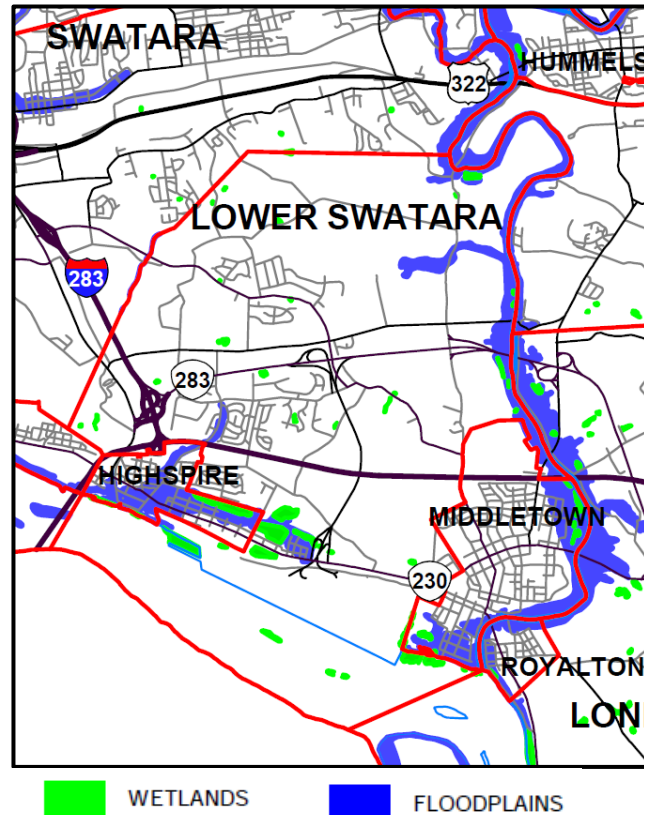


Figure 1-7 Excerpt from Map 3-3 Floodplains and Wetlands, Dauphin County Comprehensive Plan, 2008

Wetlands

Wetlands are transitional areas between land and water systems along rivers and lakeshores and in upland depressions. Wetlands help to maintain surface stream flow and groundwater recharge. They moderate stormwater runoff and downstream flood crests. They also provide important habitat for many species of plant and animal life. Most wetlands are naturally occurring, while others have resulted from grading and land management techniques.

Laws, such as the Federal Clean Water Act and similar state and local laws, have led to the enforcement of wetland protection. In Pennsylvania, the U.S. Army Corps of Engineers and the Pennsylvania Department of Environmental Protection strictly regulate development in wetland areas. Therefore, any development of these areas is subject to both federal and state permitting processes; no local regulations are required.

The National Wetlands Inventory (NWI) analyzes datasets to estimate the locations of wetlands, which can then be field verified and delineated. The NWI results are shown in Map 3-3 Floodplains and Wetlands of the 2008 Dauphin County Comprehensive Plan. See Figure 1-7. The NWI estimates 142.6 acres of wetlands in the Township, or 1.8 percent of the total area.

Implications

- Floodplains and wetlands are not suitable areas for development as both perform integral functions in drainage and groundwater recharge.

Vegetation and Wildlife

The Natural Areas Inventory of Dauphin County (2005) presents the County's known outstanding natural plant, animal and geologic features. The inventory provides locations of the most significant known areas of habitat for animal and plant species of special concern: endangered, threatened, or rare in the County, and makes recommendations for their conservation. Three sites of local significance are found in the Township. See Figure 1-8 or locations and Table 1-3 for features.

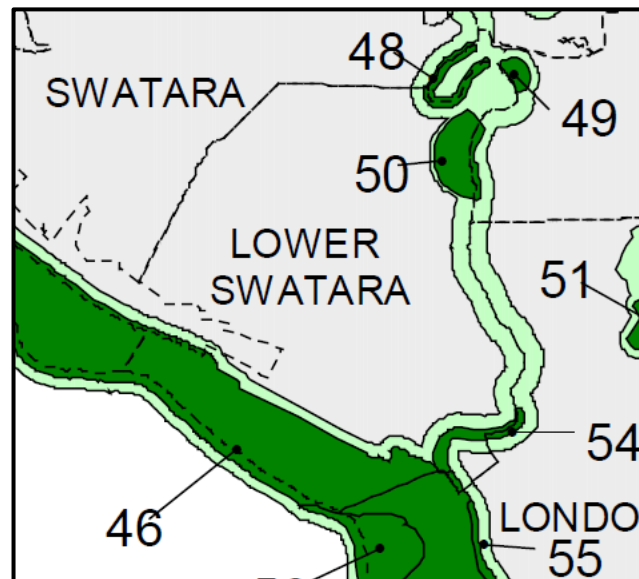


Figure 1-8 Site Index by Municipality, Natural Area Inventory, Dauphin County, 2005

Task 1-3 Locally Significant Natural Areas

Site No.	Site Name
46	SUSQUEHANNA RIVER AT MIDDLETOWN for Bald Eagle habitat Added in 2005 Location: Londonderry, Swatara, Lower Swatara Twps. Middletown Boro & York Co. Conservation Recommendations: Conservation and repair of a 100 meter-wide forested buffer along the shores of the Susquehanna River will help protect the river from sources of pollution and habitat fragmentation. Areas frequently flooded by seasonal and yearly fluctuations in the river level should be restricted from future development. Conservation of the floodplain habitat will help mitigate the effects of floodwaters on adjacent developed areas.
48	SWATARA CREEK AT FIDDLER'S ELBOW / FIDDLER'S ELBOW BLUFFS for aquatic animal species Updated in 2005 Location: Derry, Lower Swatara, Swatara Twps. Conservation Recommendations: Maintaining the best quality water possible will help these species persist at this site in the future.
50	SWATARA CREEK WOODS for two Pennsylvania Threatened plants No change Location: Derry, Lower Swatara Twps. Conservation Recommendations: None

Source: Natural Area Inventory, Dauphin County, 2005

The NAI's general recommendations for the Township state:

Forested riparian corridors should be restored and maintained where they remain. Forested buffers help filter surface water runoff, preventing many non-point sources of pollution from entering waterways, protecting water quality in the township and the Susquehanna River basin. In addition, reforestation of creek and stream banks can help link larger forested blocks together, contributing to their utility as a natural wildlife corridor. The forested blocks of the township appear to be clustered in a few areas, lending themselves to protection and connectivity. The Susquehanna River in this area is peppered with large and small islands that provide diversity in the river's topography and are important habitats for wildlife.

Implications

- The three natural sites contribute to flood mitigation and water quality and provide habitat for species of that are unique or rare to Pennsylvania. For these reasons, they should be protected from development and related impacts.

Population, demographics and household types are important to understanding and representing its residents' cultural values and service needs.

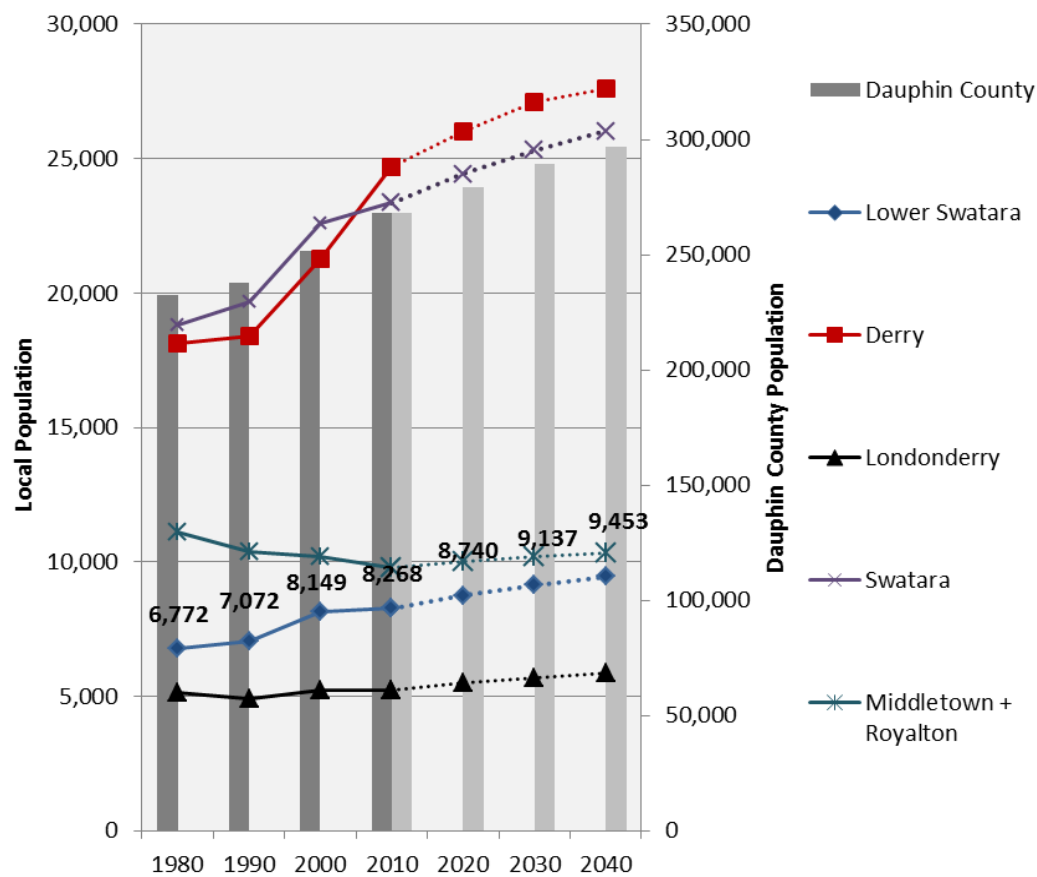
Population Change

In 2010, Lower Swatara Township had a resident population of 8,268. This figure reflects an increase of 119 residents and a growth rate of about one percent. This rate was much slower than the four percent rate of the 1980s and the 15 percent rate of the 1990s. See points and lines in Figure 2-1.

The Tri-County Regional Planning Commission projects a continued steady rise in the Township population at a rate of 3-6 percent per decade, estimating approximately 9,450 residents by 2040.

Among surrounding municipalities, Derry Township's population grew rapidly over the past two decades, Londonderry Township's population was essentially flat, and Swatara Township's population grew rapidly in the 1990s and slightly slower in the 2000s. All are projected to increase in population through 2040. Middletown and Royalton Boroughs lost population since 1980. Tri-County projects that this trend will turn by 2020 and the Boroughs will begin to recover. From a school district perspective, population growth in Lower Swatara (+119) did not offset losses in Middletown (-341) and Royalton (-56).

Figure 2-9 Township and Regional Population Change, 1980-2010, and Projections, 2020-2040

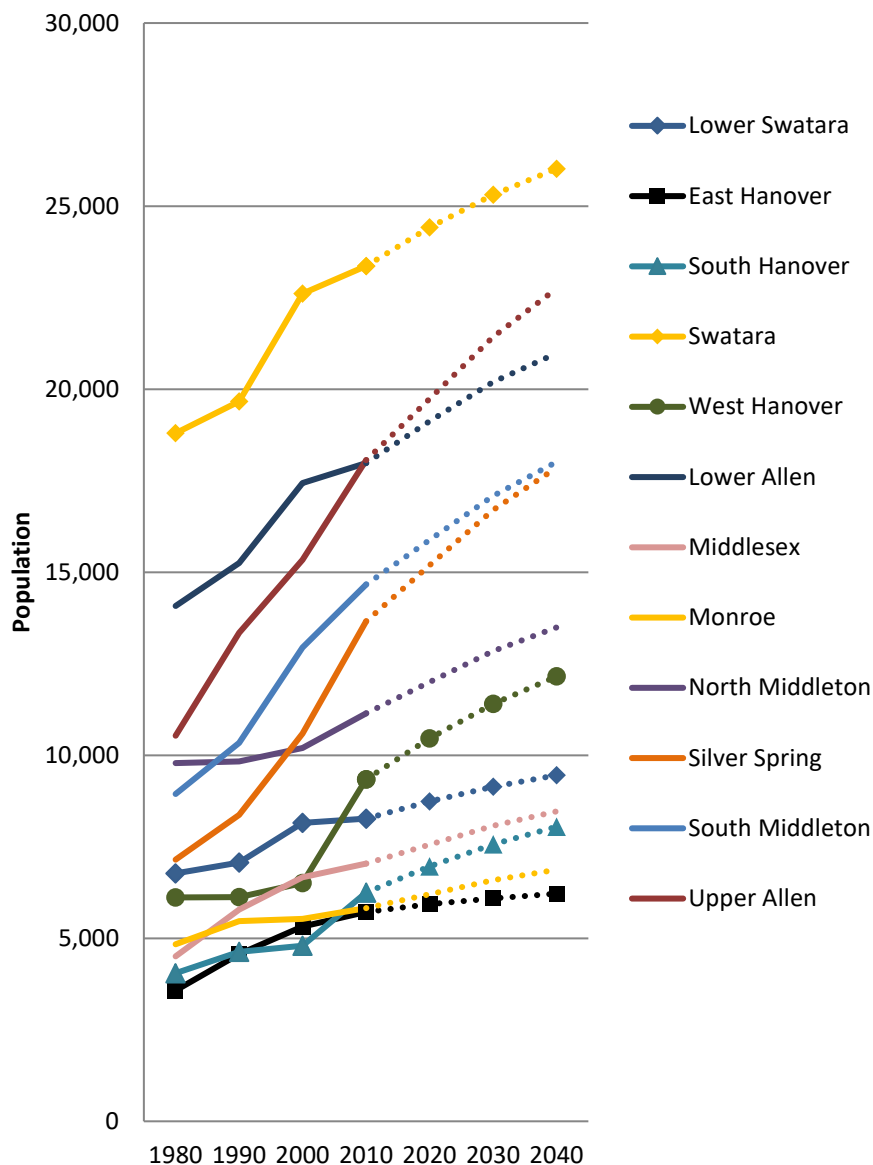


Source: 2040 Regional Transportation Plan, HATS/Tri-County Regional Planning Commission

Overall, Dauphin County experienced a population increase from 1980 to 2010, which is projected to continue. See bars in Figure 2-1.

Compared to 11 municipalities traversed by interstates in the Capital Region, Lower Swatara had the second slowest growth rate (1 percent). West Hanover, South Hanover, and Silver Spring had the three highest growth rates, each exceeding 29 percent. See Figure 2-2.

Figure 2-10 Population Change for Townships with Direct Interstate Access, 1980-2010, and Projections, 2020-2040



Source: 2040 Regional Transportation Plan, HATS/Tri-County Regional Planning Commission

Implications

- More people typically means more demand for both public and private sector services and may translate into more jobs. Population increase also implies greater use of infrastructure and facilities such as more people traveling on the transportation network, greater need for public water and sewage treatment, and potential for increased use of parks.
- There is a perception that property taxes in Lower Swatara, particularly school district taxes, which have funded several new facilities over the past decade, are a major hindrance to community growth.

Race and Ethnicity

In 2010, residents in Lower Swatara's population were predominantly single-race, white residents (90 percent) with an increasing minority race population. African Americans and residents of two or more races each increased by 150 or more residents since 2000. At the same time, the minority Hispanic population more than doubled to 300 residents (4 percent) from 2000 to 2010. See Tables 2-1 and 2-2.

Table 2-1 Population Composition by Race, 2000 and 2010

	2000	2010	Change	
Total population	8,149	8,268	119	1%
One race	98.9%	97.0%	-32	0%
White	93.7%	90.0%	-237	-3%
Black / African American	3.1%	4.8%	150	60%
American Indian, Alaska Native	-	0.2%	12	300%
Asian	1.5%	1.4%	-11	-9%
Native Hawaiian, Other Pacific Islander	-	-	-1	-100%
Some other race	0.6%	1.2%	55	117%
Two or more races	1.1%	2.9%	151	176%

Source: US Census Bureau, 2000 and 2010 Census

Table 2-2 Population Composition by Ethnicity, 2000 and 2010

	2000	2010	Change	
Total population	8,149	8,268		
Hispanic or Latino (of any race)	1.9%	4.0%	174	112%
Mexican	0.7%	1.2%	46	82%
Puerto Rican	0.8%	1.5%	57	89%
Cuban	-	-	0	0%
Other Hispanic or Latino	0.4%	1.2%	71	222%
Not Hispanic or Latino	98.0%	96.0%	-55	-1%

Source: US Census Bureau, 2000 and 2010 Census

Implications

- The Township should be aware of its increasing diversity, particularly its growing Hispanic population. Officials and staff may observe that cultural values that differ from those of the Township's majority white population, which has informed Township policy and practices to date. At some point, these policies and practices may need to be reviewed. If asked, the school district may be able to

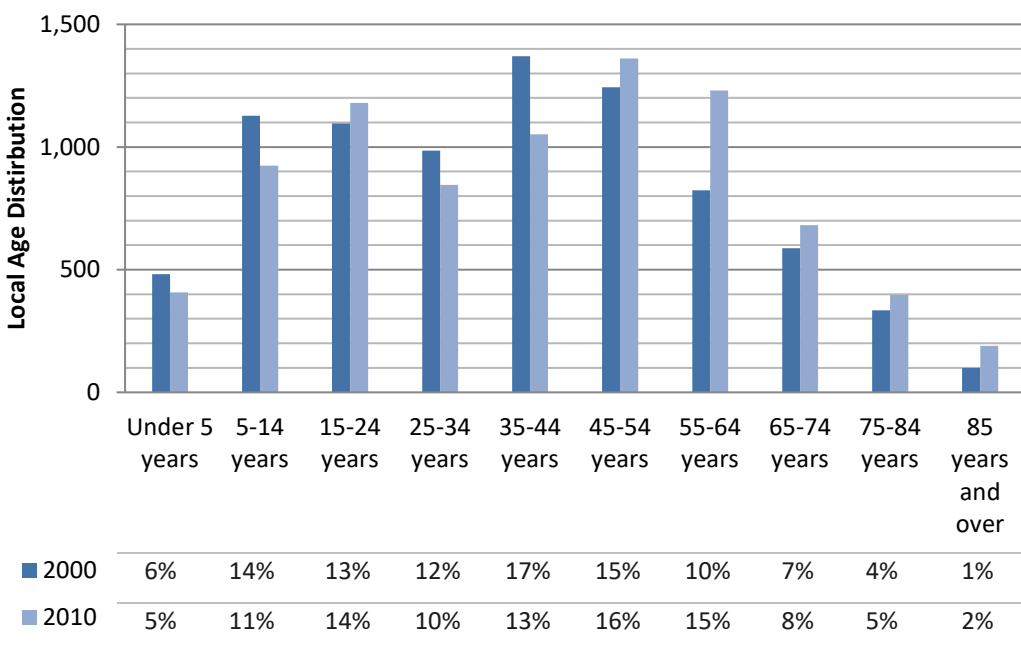
indicate if the local Hispanic population is fluent in English or may benefit from public service announcements and the like in Spanish.

Median Age and Age Distribution

Median age rose from 38.2 years in 2000 to 42.7 years in 2010. Lower Swatara's largest 10-year age cohorts were the 45-54 year cohort, the 55-64 year cohort, and the 15-24 year cohort. Its smallest cohorts were at the ends of the cohort spectrum.

Between 2000 and 2010, all cohorts under age 45 lost population except the 15-24 year cohort, which was likely due in part to the student increase at growth at Penn State-Harrisburg, and all cohorts over age 45 grew in number. See Figure 2-3.

Figure 2-11 Resident Age Distribution, 2000 and 2010



Source: US Census Bureau, 2000 and 2010 Census

Implications

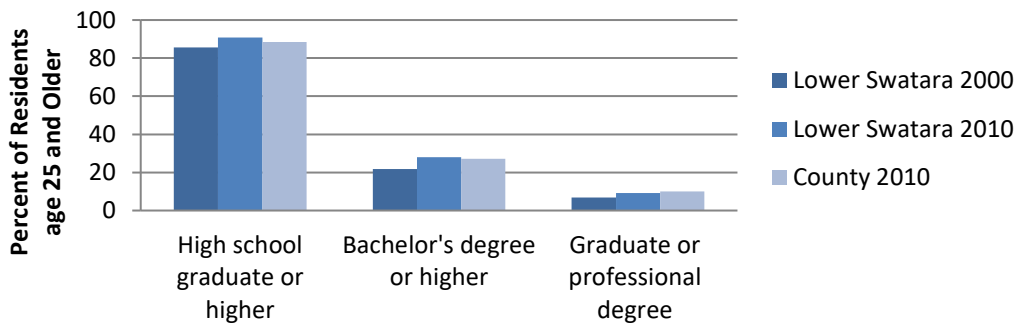
- Lower Swatara has a growing older adult and senior population. Homeowners may retain their homes and age in place or seek senior-specific housing and turn over their homes to younger (yet possibly mature) owners.
- Fewer younger people may be a natural result of a maturing community or may indicate that suitable housing is not available.
- From an economic development perspective, the local workforce is trending smaller, though the Township's transportation system provides ample access to a regional workforce.

Educational Attainment

Of the 5,756 residents age 25 and older in 2010, more than 90 percent held at least a high school degree or equivalent; 28 percent held a bachelor's degree or higher, and 9 percent

held a graduate or professional degree. These measures of educational attainment rose for all three categories from 2000 figures. See Figure 2-4.

Figure 2-12 Educational Attainment for the Population 25 Years and Older, 2000 and 2010



Source: US Census Bureau, 2000 Census and 2006-2010 American Community Survey

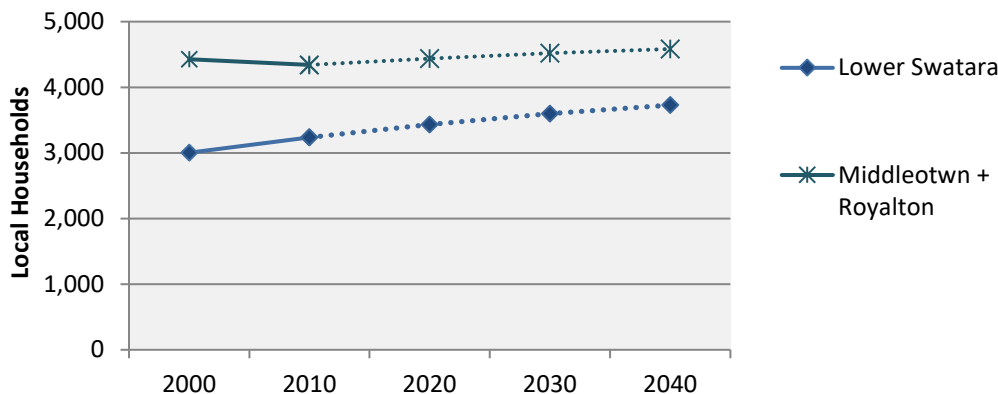
Implications

- Increasing educational attainment measures reflects improving workforce readiness. Significant increases in graduate and professional degree-bearing residents also indicate potential for research and innovation.

Households and Household Size

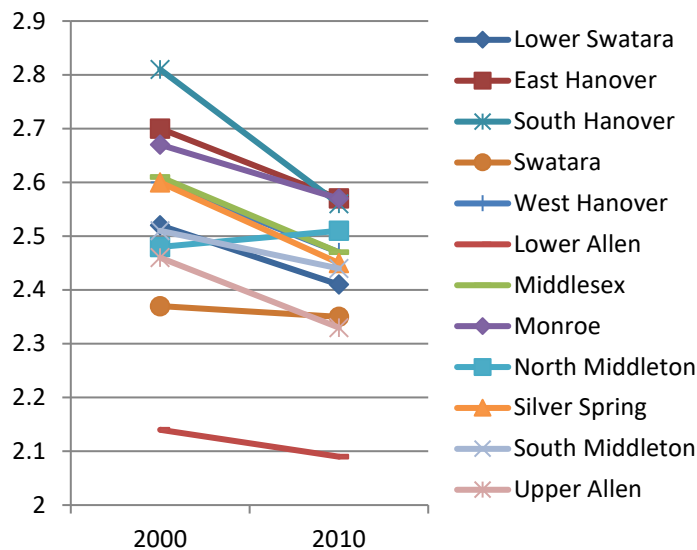
In 2010, there were 3,236 households in Lower Swatara Township. This figure reflects an increase of 233 households since 2000 – nearly double the population increase – and a household growth rate of eight percent. See Figure 2-5.

Figure 2-13 Household Change, 2000-2010, and Projections, 2020-2040



Source: 2040 Regional Transportation Plan, HATS/Tri-County Regional Planning Commission

The difference in population and household growth rates is due in large part to smaller households. Nationally, the average household size has been declining since the 1960s. Locally, most trends follow. Lower Swatara's average household size was smaller in 2010 as persons per household fell from 2.52 in 2000 to 2.41. This trend was true for all of the surveyed townships with direct interstate access in the Capital Region except North Middleton Township, Cumberland County. South Hanover Township had the steepest decline. See Figure 2-6.

Figure 2-14 Change in Household Size, 1990-2010

Source: 2040 Regional Transportation Plan, HATS/Tri-County Regional Planning Commission

Household Composition

Of the 3,326 households, the majority (71 percent) were households of related persons, or family households. Most were married couples with or without children living at home, though some were single mothers or fathers with one or more children. There were more family households in 2010 however there were fewer married couples and more single parents. (Note: 2010 was the first year that the decennial census reported single fathers.)

Non-family households comprising unrelated individuals sharing a housing unit and single occupants are the minority and more rapidly growing household type. Most on-family households are single occupants; about 1 in 3 are seniors. See Table 2-3.

Table 2-3 Household Composition, 2000 and 2010

	2000	%	2010	%	Change, 2000-10
Total households	3,003	100	3,236	100	8%
Family households (families)	2,201	73.3	2,291	70.8	4%
With own children under 18 years	995	33.1	897	27.7	-10%
Married-couple family	1,812	60.3	1,796	55.5	-1%
With own children under 18 years	772	25.7	618	19.1	-20%
Male householder, no husband present	-		130	4	
With own children under 18 years	-		69	2.1	
Female householder, no husband present	291	9.7	365	11.3	25%
With own children under 18 years	166	5.5	210	6.5	27%
Nonfamily households	802	26.7	945	29.2	18%
Householder living alone	673	22.4	773	23.9	15%
Householder 65 years and over	204	6.8	274		34%

Source: US Census Bureau, 2000 and 2010 Census

Implications

- Trends in household type may influence the housing market, particularly new residential development. The Township has already experienced its first off-campus student housing projects and will soon have its first senior-living community – both will likely include non-family households.

Household Income

The median household income as reported in 2010 was \$67,321, an increase of more than \$18,000 over ten years. Comparing both 2000 and 2010 income values in 2010 dollars, we see that 2010 household income was higher than the inflated \$65,470, demonstrating real value gained for households in the Township.

Median family income, however, barely held its buying power. This may be due in part to seniors transitioning from earned income (wages) to retirement income and to fewer couple households and more single (non-family) households. See Table 2-4. See Figure 2-8 for the distribution of household income range by household type.

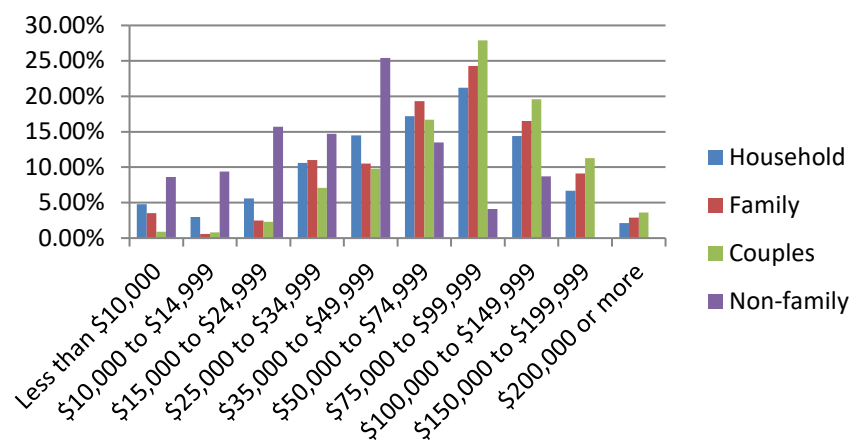
Note: Couples income and non-family income were first tracked in the 2010 decennial census.

Table 2-4 Past 12-Month Income, 2000 and 2010

	Household	Family	Couples	Non-family
Median income 2010	\$ 67,321	\$ 77,776	\$ 81,946	\$ 36,522
Median Income 2000 (1999)	\$ 48,940	\$ 58,203	-	-
In 2010 dollars	\$ 65,470	\$ 77,862	-	-
Real Growth in Income	2.83%	-0.11%	-	-

Source: US Census Bureau, 2000 Census and 2006-2010 American Community Survey

Figure 2-15 Distribution of Household Income by Household Type, 2010



Source: US Census Bureau, 2000 Census and 2006-2010 American Community Survey

Implications

- As the population continues to age, household incomes particularly among seniors are likely to trend toward fixed values and are not likely to gain significant value.

Attractive and diverse housing are among the most important assets of a community. This section describes housing units and types, occupancy, and value characteristics.

Housing Units

In 2010, Lower Swatara Township had 3,403 housing units. This figure reflects an increase of 279 units and a growth rate of about nine percent. See Table 3-1. This rate was much faster than the one percent population growth rate.

Among surrounding municipalities, all municipalities except Highspire Borough experienced increases in housing units. Londonderry Township had the most significant increase, nearly doubling its housing units over the decade, while increases in Middletown and Royalton were each less than 25 units. The Township is a leader in housing unit growth in this southern portion of Dauphin County, due to the fact that the boroughs are able to make only small increases in housing units through redevelopment.

Table 3-5 Housing Units, 2000 and 2010

	Census		Change	
	2000	2010	#	%
Lower Swatara	3,124	3,403	279	8.9%
Middletown	4,387	4,411	24	0.5%
Royalton	415	427	12	2.9%
Highspire	1,373	1,273	-100	-7.3%
Steelton	2,533	2,606	73	2.9%
Derry	9,481	10,267	786	8.3%
Hummelstown	1,953	2,050	97	5.0%
Londonderry	336	657	321	95.5%
Swatara	9,068	9,736	668	7.4%
Dauphin County	111,133	120,406	9,273	8.3%

Source: US Census Bureau

Compared to 11 municipalities traversed by interstates in the Capital Region, Lower Swatara had the slowest housing unit growth rate (9 percent). West Hanover, South Hanover, and Silver Spring had the three highest growth rates, each exceeding 40 percent. See Table 3-2.

Table 3-6 Housing Units for Townships with Direct Interstate Access, 2000 and 2010

			Change	
	2000	2010	#	%
Lower Swatara	3,124	3,403	279	8.9%
East Hanover	2,043	2,339	296	14.5%
South Hanover	1,772	2,527	755	42.6%
Swatara	9,068	9,736	668	7.4%
West Hanover	2,584	3,931	1,347	52.1%
Lower Allen	6,520	7,255	735	11.3%
Middlesex	2,392	2,703	311	13.0%
continued				

	2000	2010	Change	
			#	%
Monroe	2,165	2,375	210	9.7%
North Middleton	4,213	4,634	421	10.0%
Silver Spring	4,185	5,887	1,702	40.7%
South Middleton	5,302	6,216	914	17.2%
Upper Allen	5,198	7,007	1,809	34.8%

Source: US Census Bureau

Implications

- Housing units grew faster than the population. While housing units increased, public service demands per housing unit may be less intensive due to smaller households.

Occupancy and Vacancy

Of the 3,403 housing units, the vast majority (95 percent) were occupied units in 2010. The remaining 167 units (4.9 percent) were vacant. Among all housing units, both occupied and vacant housing units increased in number from 2000 to 2010 and the distribution shifted one percent toward vacant units. Only five of the 167 vacant units were reported as secondary residences for occasional use. See Table 3-3.

At 2.2 percent, the homeowner vacancy rate reflected a tight market, which may drive up the cost of purchase. The rental vacancy rate was greater than 10 percent. A vacancy rate of 4-6 percent is considered healthy, with opportunity for owners to choose among available units. Vacancy rates among both owner- and renter-occupied units increased from 2000 to 2010, likely an effect of the recession.

Table 3-7 Housing Units, 2000 and 2010

	2000		2010		Change
Total housing units	3,124	100	3,403	100	279
Occupied housing units	3,003	96.0%	3,236	95.0%	233
Vacant housing units	121	3.9%	167	4.9%	46
For seasonal, recreational, or occasional use	4	0.1%	5	0.1%	1
Homeowner vacancy rate	1.3%	-	2.2%	-	0.9
Rental vacancy rate	8.4%	-	10.2%	-	1.8

Source: US Census Bureau

Implications

- Prices for owner-occupied units may have been under pressure, while the landlords may have difficulty finding renters.

Housing Type

Housing unit types were estimated in 2010 by the American Community Survey; this estimate of 3,250 housing units is slightly less than the 3,403 housing units counted in the 2010 census. Compared to the distribution of housing unit types in 2000, the housing market in Lower Swatara offered more single-family detached and single-family attached units and more 3- to 4-unit apartments in 2010. The percentages of 2-unit apartments, 5+-unit apartments and mobile homes fell. See Table 3-4.

Table 3-8 Distribution of Housing Type (Units in Structure), 2000 and 2010

	2000	2010	Change in Percentage
Total housing units	3,124	3,250	
1, detached	58.8%	64.8%	6.0
1, attached	14.4%	18.0%	3.6
2 apartments	2.2%	0.7%	-1.5
3 or 4 apartments	0.6%	2.1%	1.5
5 to 9 apartments	1.8%	0.6%	-1.2
10 or more apartments	0.8%	0.7%	-0.1
Mobile home or other type of housing	21.3%	13.0%	-8.3

Source: U.S. Census Bureau, 2006-2010 American Community Survey

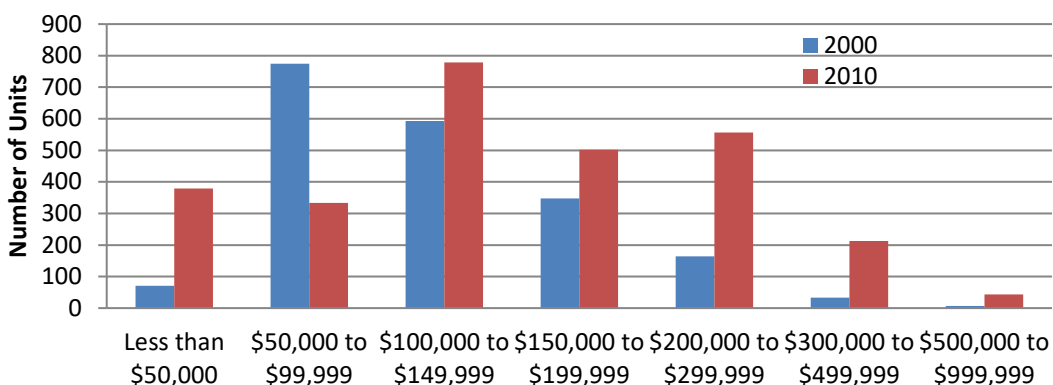
Implications

- Housing options increased for those seeking single-family homes. Housing options became more limited for those seeking apartments for temporary housing or lifestyle choices.

Owner-occupied Housing Value

According to US Census Bureau, the distribution of owner-occupied home values shifted slightly from 2000 to 2010. The number of homes in each home value range increased except in the \$50,000 to \$99,999 category where the number fell by about 440 units. The greatest numeric increase was in the \$200,000 to \$299,999 category (392 units) followed by a 308 unit increase in the less than \$50,000 category. Smaller increases in the \$300,000 to \$499,999 category (180 units) and \$500,000 to \$999,999 category (36 units) were significant in that their percentages increases exceeded 500 percent. See Figure 3-1.

The median owner-occupied housing unit value increased from \$109,000 in 2000 to \$144,400 in 2010. After accounting for inflation, this \$34,800 increase translates to a real gain in median home value of \$3,264 or 2.3 percent.

Figure 3-16 Housing Value of Specified Owner-occupied Units, 2000 and 2010

Source: U.S. Census Bureau, 2000 Census and 2006-2010 American Community Survey

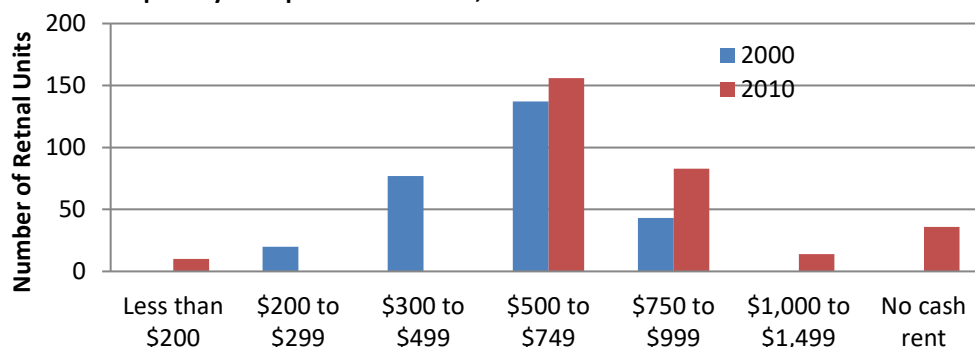
Implications

- Overall, home values rose, thereby increasing the value of property taxes revenue for the Township and for the school district.

Occupied Unit Rent

According to Census Bureau, the distribution of rent paid for rental units shifted widely from 2000 to 2010. Rentals at the lowest rate (less than \$200) increased from 0 to 10 units and rentals paying no cash rent increased from 0 to 36 units. Rental units paying \$200 to \$499 were eliminated. Rentals from \$500 to \$1,499 increased by 73 units. No rentals were paying rent of \$1,500 or higher. See Figure 3-2. These figures reflect the redevelopment of parcels near Penn State Harrisburg for private off-campus student housing.

The median rent paid on occupied rental units increased from \$565 in 2000 to \$720 in 2010. After accounting for inflation, this \$155 increase translates to a real loss in median rent of \$7.57 or 1.0 percent.

Figure 3-17 Rent paid by Occupied Rental Units, 2000 and 2010

Source: U.S. Census Bureau, 2000 Census and 2006-2010 American Community Survey

Implications

- Redevelopment of new rental units at a higher unit density likely increased public service demand per unit in the area near Penn State Harrisburg, though the impact overall was likely small.

An analysis of the local economic conditions and trends provides a basis for land use, transportation and infrastructure planning. This section describes the economy by its industries, local labor force, and commuting patterns.

Economic Resources

According to the 2012 Economic Census, Lower Swatara had 205 business establishments within its borders.¹ These businesses employed approximately 5,500 workers. The three industries with the most businesses were transportation and warehousing (34 businesses), wholesale trade (20), and retail trade (19). Together they employed 2,348 workers, or about 43 percent of all workers whose jobs were located in the Township. Government employer data was not fully reported.

Major private sector employers in Lower Swatara include FedEx and its affiliates, TE Connectivity (formerly Tyco Electronics), Phoenix Contact, and numerous commercial and industrial entities concentrated along Fulling Mill Road. Major public sector employers include the Pennsylvania Turnpike Commission, the Harrisburg International Airport, the Penn State Harrisburg and the Middletown Area School District.

Local Jobs

From the Longitudinal Employer-Household Dynamics (LEHD) program at the Center for Economic Studies, also at the U.S. Census Bureau, jobs in the Township in 2012 were counted as 8,518; public administration (includes the Pennsylvania Turnpike Commission), transportation and warehousing, and manufacturing ranked as the top three industries of employment. See Table 4-1.

Table 4-9 Jobs by Industry, Ranked, 2012

	Count	Percent of Total
Total Jobs	8,518	100%
Public Administration	1,632	19.2%
Transportation and Warehousing	1,522	17.9%
Manufacturing	1,287	15.1%
Wholesale Trade	728	8.5%
Administration & Support, Waste Management and Remediation	673	7.9%
Educational Services	637	7.5%
Accommodation and Food Services	341	4.0%
Health Care and Social Assistance	264	3.1%
Construction	207	2.4%
Retail Trade	204	2.4%
Other Services (excluding Public Administration)	196	2.3%
Arts, Entertainment, and Recreation	154	1.8%
Finance and Insurance	139	1.6%
Real Estate and Rental and Leasing	140	1.6%
continued		

¹ The Economic Census does not generally include government-owned establishments, even when their primary activity would be classified in industries covered by the Economic Census. Because of these exclusions, economic census data for industries in many sectors might appear to be incomplete.

	Count	Percent of Total
Management of Companies and Enterprises	129	1.5%
Utilities	93	1.1%
Professional, Scientific, and Technical Services	83	1.0%
Information	54	0.6%
Agriculture, Forestry, Fishing and Hunting	25	0.3%
Mining, Quarrying, and Oil and Gas Extraction	10	0.1%

Source: Longitudinal Employer-Household Dynamics

Approximately half of the jobs at local employers are filled by workers with some college education or a completed degree and one in five positions was held by a person with bachelor's or advanced degree. See Table 4-2.

Table 4-10 Jobs by Worker Educational Attainment, 2012

	Count	Percent of Total
Less than high school	580	6.8%
High school or equivalent, no college	2,341	27.5%
Some college or Associate degree	2,441	28.7%
Bachelor's degree or advanced degree	1,847	21.7%
Educational attainment not available (workers aged 29 or younger)	1,309	15.4%

Source: Longitudinal Employer-Household Dynamics

Employers attract workers primarily from central and southern Dauphin County. More than 150 local workers live in Philadelphia and may commute by train or telecommute. See Table 4-3.

Table 4-11 Where Job Workers Live, 2012

	Count	Percent of Total
Harrisburg city, PA	382	4.5%
Middletown borough, PA	308	3.6%
Colonial Park CDP, PA	162	1.9%
Philadelphia city, PA	154	1.8%
Progress CDP, PA	111	1.3%
Elizabethtown borough, PA	107	1.3%
Steelton borough, PA	100	1.2%
Hershey CDP, PA	91	1.1%
Linglestown CDP, PA	75	0.9%
Palmyra borough, PA	57	0.7%
All Other Locations	6,971	81.8%

Source: Longitudinal Employer-Household Dynamics

Resident Workers

The 3,605 Lower Swatara residents who were employed in 2012, regardless of job location, were most commonly employed in health care and social assistance (465), public administration (371), retail trade (358), and manufacturing (310), followed by accommodation and food services (263) and finance and insurance (257). See Table 4-4.

Table 4-12 Resident Workers by Industry, 2012

	Count	Percent of Total
Total Resident Workers	3,605	100%
Health Care and Social Assistance	465	12.9%
Public Administration	371	10.3%
Retail Trade	358	9.9%
Manufacturing	310	8.6%
Accommodation and Food Services	263	7.3%
Finance and Insurance	257	7.1%
Educational Services	240	6.7%
Transportation and Warehousing	227	6.3%
Wholesale Trade	194	5.4%
Administration & Support, Waste Management and Remediation	173	4.8%
Professional, Scientific, and Technical Services	170	4.7%
Construction	119	3.3%
Other Services (excluding Public Administration)	111	3.1%
Arts, Entertainment, and Recreation	108	3.0%
Management of Companies and Enterprises	86	2.4%
Information	51	1.4%
Utilities	45	1.2%
Real Estate and Rental and Leasing	37	1.0%
Agriculture, Forestry, Fishing and Hunting	19	0.5%
Mining, Quarrying, and Oil and Gas Extraction	1	0.0%

Source: Longitudinal Employer-Household Dynamics

Resident workers have attained educational level nearly equivalent to local jobs workers. See Table 4-5.

Table 4-13 Resident Workers by Educational Attainment, 2012

	Count	Percent of Total
Less than high school	228	6.3%
High school or equivalent, no college	908	25.2%
Some college or Associate degree	940	26.1%
Bachelor's degree or advanced degree	798	22.1%
Educational attainment not available (workers aged 29 or younger)	731	20.3%

Source: Longitudinal Employer-Household Dynamics

The majority of resident workers commuted to outside locations for work. Both East Shore and West Shore communities made the list of top ten employment destinations. See Table 4-6.

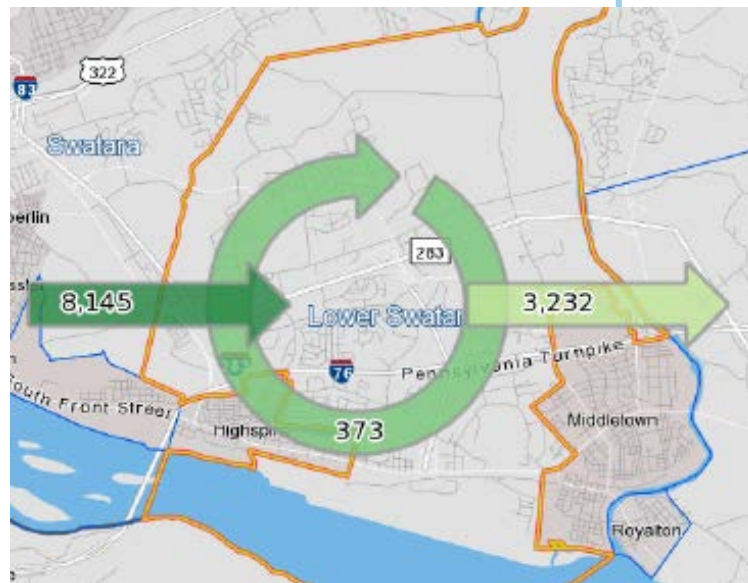
Table 4-14 Where Resident Workers Work, 2012

	Count	Percent of Total
Harrisburg city, PA	497	13.8%
Hershey CDP, PA	333	9.2%
Colonial Park CDP, PA	81	2.2%
Middletown borough, PA	74	2.1%
Paxtonia CDP, PA	71	2.0%
Progress CDP, PA	61	1.7%
Lemoyne borough, PA	41	1.1%
Steelton borough, PA	40	1.1%
Carlisle borough, PA	30	0.8%
Camp Hill borough, PA	23	0.6%
All Other Locations	2,354	65.3%

Source: Longitudinal Employer-Household Dynamics

Commuting to Work

With 8,518 jobs in the Township in 2012, more than twice as many workers commuted into the Township (8,145) as commuted out of (3,232) to reach their employment destination. Among those traveling, 86.0% drove alone, 5.5% carpooled, 4.9% walked, 0.4% took public transit, and 0.3% took a cab, motorcycle, or other means. This puts significant pressure on the transportation system. That same year, less than three percent of working residents worked at home, requiring no travel commute to work.

Figure 2-18 Worker Flows into and out of Lower Swatara

Source: U.S. Census Bureau, 2012 Economic Census.

Employment Status of Residents

In 2012, unemployment among resident workers was 2.7 percent, according to the American Community Survey. The local unemployment rate fell to 2.3 percent in 2013 and 1.8 percent in 2014.

Of Township residents age 16 and older, employment in 2012 peaked at 91 percent for those 25 to 44 years old followed by a strong 87 percent for persons age 45 to 54. Unemployment was highest, 6 percent, among persons age 16 to 19.

For the roughly 200 persons living below the poverty in 2012, unemployment was nearly 60 percent. For those with less than a high school education, unemployment was also much higher—28 percent. For those with a disability in 2012, half (150) were participating in the labor force and all of these were employed.

Table 4-15 Employment Status, 2012

	Total Estimate	In labor force Estimate	Employed Estimate	Unemployed Estimate
Population 16 years and over	6,928	66.1%	64.3%	2.7%
Employment status by age				
16 to 19 years	703	42.5%	40.1%	5.7%
20 to 24 years	728	56.0%	56.0%	0.0%
25 to 44 years	1,791	93.4%	90.8%	2.7%
45 to 54 years	1,498	89.2%	87.1%	2.3%
55 to 64 years	952	69.2%	66.1%	4.6%
65 to 74 years	672	22.3%	22.3%	0.0%
75 years and over	584	9.2%	9.2%	0.0%
Below poverty level in the past 12 months	193	40.9%	17.1%	58.2%
Educational attainment for population 25 to 64 years	4,241	86.5%	84.0%	2.9%
Less than high school graduate	214	75.7%	54.2%	28.4%
High school graduate or equivalent	1,437	83.2%	82.0%	1.3%
Some college or associate's degree	1,342	86.7%	84.4%	2.7%
Bachelor's degree or higher	1,248	91.9%	90.8%	1.2%
With any disability	302	50.3%	50.3%	0.0%

Source: US Census Bureau, 2008-2012 American Community Survey

Implications

- Residents have high employment (low unemployment) among those with a high school education or higher. Those with less than a high school education were more likely to be unemployed.
- While educational attainment levels are well-matched between resident workers and local jobs, leading industries and ultimately individual positions are not aligned. Resident workers and inbound commuters will continue to place heavy demands on the transportation system.

Cultural and historic resources provide relevant information for land use, eco-tourism and recreation planning. This section presents known information about potentially historical resources

Cultural & Historic Resources

The Pennsylvania Historical and Museum Commission Cultural Resources database, CRGIS, lists 30 resources for which some level of historical data has been collected. Of these 30 resources, two are listed on the National Register of Historic Places, a program of the National Park Service that protects nationally significant resources from indiscriminate impacts of federally funded projects. Such projects must consider and disclose their impacts to surrounding resources.

The Conrad Alleman House (also known as the Old Reliance Farmhouse) and the Star Barn Complex are “listed” on the National Register. The Star Barn is expected to be relocated to West Donegal Township, Lancaster County in the near future.

Twenty-one additional sites have been evaluated by the State Historic Preservation Office or SHPO for potential listing on the National Register: 12 were determined to be eligible and 9, ineligible at the time of the evaluation. Eligible sites include several homes, the Pennsylvania Turnpike corridor, and the Pennsylvania Railroad corridor. Ineligible properties include the Olmstead Army Airfield and Middletown Air Depot associated buildings, the Highspire Cemetery and additional residential properties. These properties would be re-evaluated if application to the National Register is sought in the future.

Five additional sites have been catalogued in the database. These either have insufficient information or significance to be eligible for listing. Two sites are noted as demolished.

Table 5-16 Inventoried Cultural Resources

Key Number	Primary Historic Name	National Register Status	Resource Category	Year Built
144154	Alleman, Conrad, House 1412 Farmhouse Ln.	Listed in 2011	Building	1788; c1880
079148	Star Barn Complex; John Motter Barn Nissley Dr.	Listed in 2000	Building	1872
087198	Motter, John Farm (Spring Garden Farm) 1260 Lumber St.	SHPO: Eligible	Building	1897
156425	Matheson, William David, House 331 W Main St.	SHPO: Eligible	Building	c1901
156426	Musselman House 281 W Main St.	SHPO: Eligible	Building	c1885
142024	Mumma Farm 225 Oberlin Rd.	SHPO: Eligible	Building	1858; 1893
122695	Pennsylvania Turnpike: Philadelphia [Eastern] Extension (Carlisle to Valley Forge)	SHPO: Eligible	Structure	c1948; c1950
156427	Bradley House 277 W Main St.	SHPO: Eligible	Building	1889
116364	Odd Fellows Home of Pennsylvania 999 W Harrisburg Pike	SHPO: Eligible	Building	1925
092271	Ulrich, Michael, House 140 Fulling Mill Rd.	SHPO: Eligible	Building	1825
	continued			

Key Number	Primary Historic Name	National Register Status	Resource Category	Year Built
105675	Pennsylvania Railroad: Main Line (Philadelphia to Harrisburg)	SHPO: Eligible	District	
116360	Zimmerman House 103-105 Rosedale Ave.	SHPO: Eligible	Building	1926
111777	Middletown Air Depot Historic District	SHPO: Not Eligible	District	
200665	Maria Marroquin Property 1845 Rosedale Ave.	SHPO: Not Eligible	Building	c1900
133214	along SR 3001	SHPO: Not Eligible	Bridge	1950
092249	L.R. 129 Bridge Bridge No. 22 1 0 0129 0 047286	SHPO: Not Eligible	Structure	c1931
122697	Highspire Cemetery Eisenhower Blvd.	SHPO: Not Eligible	Site	c1820
144208	Middletown and Hummelstown Railroad (Middletown to Hummelstown)	SHPO: Not Eligible	District	c1890
200666	Mario Corradi Property 2 South Nissley Dr.	SHPO: Not Eligible	Building	c1960
156465	Middletown Air Depot Base Chapel 501 Ann St.	SHPO: Not Eligible	Building	1942
157287	Olmstead Army Airfield and Middletown Air Depot	SHPO: Not Eligible	District	1917
122695	Pennsylvania Turnpike: Harrisburg East Interchange	Noncontributing to Resource	Structure	1950
116362	Rosedale Farm House 1 Rosedale Ave.	Insufficient Information to Evaluate	Building	c1850
200664	Nissley Drive Post World War II Subdivision	Insufficient Information	District	c1955
144357	Union Canal: Middletown to Reading	Insufficient Information	Structure	c1826
083693	Whitehouse Lane Bridge	Demolished or 100% Destroyed	Bridge	1920
100885	Immaculate Conception Home for Children	Demolished or 100% Destroyed	Building	1915

Source: Pennsylvania Historical and Museum Commission Cultural Resources Geographic Information System (CRGIS)

Five Pennsylvania historical markers are located in the vicinity of the Township. These markers describe people, places and events that are significant in state history.

Finally, other buildings, cemeteries, etc. document the history of the Township's development in their location and design. Farms such as Strites' Orchard and Farm Market have operated here for more than 100 years. There is no known inventory or assessment of these resources.

Implications

- Re-use and redevelopment of the Olmstead Army Airfield and Middletown Air Depot have obscured or demolished the most significant aspects of local history, and few local residents have demonstrated an interest in historic preservation.

Land use analysis provides a basis for changes to land use controls, e.g. zoning, and coordinated infrastructure expansion. This section describes land uses as of 2014 and characterizes recent development activity.

Land Use

Land use is the activity occurring on the land at a particular point in time. Land use changes over time as a result of natural events and economic pressures. Examples include change to more intensive uses with extension or upgrades in supporting infrastructure, can be preserved as protected open space by public ownership or deed restriction, and can be converted to open space with the demolition of structures and impervious surfaces. All can be considered aspects of a community's evolving development or redevelopment.

Land use change, specifically, reuse and redevelopment, has been a part of the Township's history for more than a hundred years. Lands where the Harrisburg International Airport and Penn State Harrisburg are located were first developed by the military in the late 1800s and renamed the Olmsted Air Force Base after World War II. Decommissioning of the air force base made administrative buildings and residence facilities available to the state for re-use as a branch campus of Penn State University in the Harrisburg area, established in 1966. The air field was developed into a commercial airport to offer passenger aviation and air freight services, commencing in 1969. Both the university and the airport have redeveloped various sites in efforts to modernize facilities and meet market needs. Other properties, such as the Capitol Logistics Center and the school district, have been redeveloped with modern facilities for continued use. The central and northern portions of the Township have typically experienced only a single wave of development for residential, commercial, or industrial uses.

Current Land Use

Land use classification data was most recently updated for Dauphin County in 2014. In 2014, 40 percent of lands in Lower Swatara Township were used for intensive uses, namely residential, commercial, industrial, and institutional uses, or were actively under construction. Quarrying was active in two percent of the Township, and agricultural activities were evident on 20 percent. Open space, such as parks, lawns, and landscapes, as well as natural areas, including river islands, occupied the remaining 38 percent. See Figure 5-1 and Table 5-1.

Table 5-17 Land Status, 2014

	Acres	Percent of Total
Total	9,369.38	100%
Developed	3,784.49	40%
In agricultural use, not preserved	1,840.11	20%
In other unpreserved open space	3,603.88	38%
In extractive use	140.89	2%

Figure 5-19 Land Use Pattern, 2014



Source: Tri-County Regional Planning Commission

Table 5-18 Land Use by Type, 2014

Code	Description	Calculated Total Acres
	Total Acres	9,369.38
111	Residential - less than 2 units per acre.	361.50
112	Residential - 2.1 to 7 units per acre.	663.07
113	Residential - more than 7 units per acre	168.63
114	Farmsteads - farmhouses, usually associated with and including, barns and outbuildings. (NOT including large, commercial-sized hog/chicken operations; 230). Agriculture may or may not be active.	66.12
120	Commercial and services - Store, shop, mall, gas station or place of business where large-scale production is not occurring.	183.63
130	Industrial - Large buildings that may have production in process.	707.08
140	Transportation and utilities - Transportation right-of-way, toll booth areas, highway departments, transmission stations, water towers/tanks, sewage treatment plants.	1,148.26
180	Institutional - Schools, hospitals, churches and adjoining cemeteries, municipal facilities, fire houses, or other institutional facilities.	359.31
190	Recreational – Parks, campgrounds, golf courses, hunt clubs.	71.15
211	Agriculture: cropland.	1,449.95
212	Agriculture: pasture.	92.05
213	Agriculture: other.	54.51
220	Orchards/groves/vineyards/nurseries/other horticulture.	228.09
230	Large Confined Feeding Operations - Usually associated with a farmstead (114), these are commercial sized building.	15.52
310	Herbaceous - Open, grassy areas with few trees or shrubs.	419.79
320	Shrub/brush - Areas with shrubs, brush, and/or very small trees.	254.09
330	Mixed cover - Areas that are not forested but have a mixture of vegetation.	117.90
410	Deciduous Forest.	1,175.08
500	Coniferous Forest.	1,527.00
750	Mines, quarries, pits and junk yards, and landfills.	140.89
760	Transitional (under construction).	126.89
997	Islands less than minimum mapping unit size.	38.86

Source: Tri-County Regional Planning Commission, 2014; HRG, 2015 tabulations

Among developed uses, residential uses had the highest acreage followed by transportation and utilities. Among open space uses, woodlands and other areas dominated by vegetation had nearly twice as much acreage as agricultural uses.

Land Use Trends

Across time, land use classification methods have evolved. In 1976, land use was likely assigned and acreages were likely measured from a paper map, while since 2002 Tri-County Regional Planning Commission has used geographic information systems or GIS technology to map and analyze geographic data. Even with the same technology,

corrections in municipal boundaries and refinement of sub-parcel classification have vastly affected the resulting land use data and acreage calculations. For example, a parcel that was one assigned as commercial use may later be assigned commercial use for the structure, parking lot and immediate surroundings while the balance of the parcel may be assigned as open space. Thus, change over time should be viewed with this in mind.

Generally, community development uses have consumed more land over time. Recent declines in residential, commercial and industrial use acreage are attributed to maturing vegetation that is now separately designated as woodland/open space. Transportation and utility uses and institutional uses have remained steady in their acreage. Recreational use acreage has increased but still comprises only one percent of the Township's total area. Transitional use is a new use code in 2014, applied to parcels or sub-parcels reflecting site disturbance or construction activity.

Among open space uses, agricultural use acreage fell slightly from 2002 to 2014, while woodland/open space more than doubled. Resource extraction acreage was essentially steady.

Table 5-19 Land Use Distribution, 2014

	1976		2002		2014	
Community Development Uses	2,379	30%	4,151	54%	3,784	40%
Residential	621	8%	1,630	21%	1,259	13%
Commercial	125	2%	382	5%	184	2%
Industrial	137	2%	1,000	13%	707	8%
Transportation and Utilities	1,145	14%	828	11%	1,148	12%
Institutional	327	4%	290	4%	359	4%
Recreational	24	0%	21	0%	71	1%
Transitional	-		-		127	1%
Open Space Uses	5,557	70%	3,552	46%	5,585	60%
Agriculture	5,557	70%	2,166	28%	1,840	20%
Woodland and Open Space	-		1,249	16%	3,604	38%
Resource Extraction	-		137	2%	141	2%
Total Land Area	7,936		7,703		9,369	
Open Water	1,408		1,492			
Total Area	9,344		9,195			

Source: 1976 Township Comprehensive Plan; 2002 and 2014 Tri-County Regional Planning Commission

The Tri-County Regional Planning Commission shared interim land use data from 2008. This data reflected real changes in uses, such as development of new homes and businesses and as well as refinements in the delineation of open space within developed sites. Thus changes are widespread.

Recent Development and Remaining Zoning Capacity

Residential Development Trends

Table 5-4 presents residential development activity in two periods: a decade-long view of 2005-2014 and a more recent view of 2009-2014, since the economic recession was declared over, with single-family versus other residential types.

Lower Swatara ranked third among southern Dauphin County municipalities for the 2005-2014 period and second for the more recent 2009-2014, due in large part to the private multi-unit student housing project. While the student housing project was significant in Lower Swatara, other communities across the region and the country experienced an increase in multi-family residential development in response to the recession. Compared to other municipalities with direct interstate access in the Capital Region, the Township did not experience as much overall residential development activity as most.

Table 5-20 Residential Development Trends

New Dwelling Units	Total, 2005-14	Total, 2009-14	Single and Semi- detached, 2009-14	Multi/Attached/ Apartment Conversions, 2009-14
Southern Dauphin County				
Derry	619	258		
Highspire	16	6		
Hummelstown	92	35		
Londonderry	103	51	65%	0%
Lower Swatara	432	270	18%	77%
Middletown	39	23		
Royalton	89	73		
Swatara	878	605	33%	85%
<i>Area above as percent of County</i>	28%		30%	46%
Dauphin County	8,093	3,590	1552	1926
Other Dauphin County				
East Hanover	315	121	58%	13%
South Hanover	716	261	51%	20%
West Hanover	980	277	56%	22%
Cumberland County				
Lower Allen	724	513	18%	77%
Middlesex	344	132	33%	66%
Monroe	216	113	69%	25%
North Middleton	696	210	64%	14%
Silver Spring	1,980	1,238	74%	26%
South Middleton	810	300	76%	13%
Upper Allen	1,466	612	57%	43%

Source: Annual Building Activity reports, 2009-14, Tri-County Regional Planning Commission

Projected Residential Development Trends

Tri-County Regional Planning Commission projected household increases for through 2040. While Lower Swatara is projected to increase in residential households, it lags behind most other municipalities with direct interstate access in the Capital Region in projected numbers. Using the 2009-2014 ratio of single-family to other residential types results in a high number of multi-family, etc. units, though not the highest of the surveyed municipalities.

Table 5-21 Projected Residential Development Trends

Projected Household (Dwelling Unit) Increase	2010-20	2020-30	2030-40	Total, 2010-40	Single and Semi-detached, per 2009-14 trend	Multi/Attached/Apartment Conversions, per 2009-14 trend
Southern Dauphin County						
Derry	571	468	227	1,266	501	628
Highspire	9	8	6	23	23	0
Hummelstown	58	49	39	146	21	125
Londonderry	97	82	65	244	158	0
Lower Swatara	196	165	131	492	89	381
Middletown	74	62	50	186	24	24
Royalton	22	19	15	56	54	0
Swatara	451	381	302	1,134	373	967
<i>Area above as percent of County</i>				30%	24%	33%
Dauphin County	4,764	4,042	3,195	12,001	5,188	6,438
Other Dauphin County						
East Hanover	57	63	49	169	98	22
South Hanover	280	236	187	703	356	140
West Hanover	453	383	303	1,139	641	247
Cumberland County						
Lower Allen	548	514	373	1,435	260	1,108
Middlesex	210	207	159	576	192	380
Monroe	149	147	113	409	282	101
North Middleton	341	336	258	935	597	129
Silver Spring	624	616	472	1,712	1,261	444
South Middleton	500	493	379	1,372	1,038	178
Upper Allen	720	724	565	2,009	1,139	860

Source: 2040 Regional Transportation Plan (Appendix), HATS/Tri-County Regional Planning Commission

Hundreds of acres of capacity remain available for residential development of varying types in the Residential-Agricultural, Residential-Suburban, and Residential-Urban districts.

Commercial Development Trends

Table 5-6 presents commercial development activity for the 2009-2014 period and projected activity for the 2015-2024 period based on the past trend.

Lower Swatara ranked fourth among southern Dauphin County municipalities for new commercial development (uses) and third for improved or expanded commercial uses. Lower Swatara's commercial development activity was similar to other municipalities with direct interstate access in the Capital Region in that more commercial uses improved or expanded their operations than started new; specifically, most similar to West Hanover, South Middleton and Upper Allen Townships.

Table 5-22 Commercial Development Trends

Commercial	Actual		Projected	
	New, 2009-14	Improved/Expanded, 2009-14	New, 2015-2024	Improved/Expanded, 2015-2024
Southern Dauphin County				
Derry	17	244	28	407
Highspire	5	2	8	3
Hummelstown	43	35	72	58
Londonderry	5	7	8	12
Lower Swatara	10	81	17	135
<i>as percent of County</i>	6%	3%		
Middletown	3	6	5	10
Royalton	0	0	0	0
Swatara	23	246	38	410
<i>Area above as percent of County</i>	64%	22%		
Dauphin County	165	2864	275	4773
Other Dauphin County				
East Hanover	5	45	8	75
South Hanover	7	24	12	40
West Hanover	13	48	22	80
Cumberland County				
Lower Allen	8	145	13	242
Middlesex	7	61	12	102
Monroe	1	6	2	10
North Middleton	1	6	2	10
Silver Spring	52	189	87	315
South Middleton	21	107	35	178
Upper Allen	17	123	28	205

Source: Actual: Annual Building Activity reports, 2009-14, Tri-County Regional Planning Commission; Projected: Gannett Fleming, Inc.

Table 5-7 shows that commercial development activity did not significantly affect commercial land use acreage from 2008 to 2014. The intended use of transitional lands under construction at the time of the land use classification update is not known. Development, both new and improved/expanded, appears to have been predominantly re-use.

Table 5-23 Commercial Land Use Trend

	2002	2008	2014	2002-08	2008-14
Commercial	382	216	196	-166	-20
Transitional (under construction)		87	130	87	43

Source: Tri-County Regional Planning Commission

Based on the trend, Lower Swatara should expect little change in demand for commercially zoned property. With more than 100 acres available in Commercial Highway, Commercial Neighborhood, and Office-Park, there is no need for an increase in the amount commercial zoning.

Industrial Development Trends

Table 5-8 presents industrial development activity for the 2009-2014 period and projected activity for the 2015-2024 period based on the past trend.

Lower Swatara ranked first among southern Dauphin County municipalities for new industrial development (uses) and for improved or expanded industrial uses. Lower Swatara's industrial development activity ranked second after South Middleton Township among other municipalities with direct interstate access in the Capital Region.

Table 5-24 Industrial Development Trends

Industrial	Actual		Projected	
	New, 2009-14	Improved/Expanded, 2009-14	New, 2015-2024	Improved/Expanded, 2015-2024
Southern Dauphin County				
Derry	0	36	0	60
Highspire	0	0	0	0
Hummelstown	0	0	0	0
Londonderry	1	9	2	15
Lower Swatara	4	74	7	123
<i>as percent of County</i>	<i>57%</i>	<i>38%</i>		
Middletown	0	3	0	5
Royalton	0	0	0	0
Swatara	1	0	2	0
<i>Area above as percent of County</i>	<i>86%</i>	<i>62%</i>		
Dauphin County	7	197	12	328
Other Dauphin County				
East Hanover	0	6	0	10
South Hanover	1	0	2	0
continued				

Industrial	Actual		Projected	
	New, 2009-14	Improved/Expanded, 2009-14	New, 2015-2024	Improved/Expanded, 2015-2024
Southern Dauphin County cont'd				
West Hanover	0	3	0	5
Cumberland County				
Lower Allen	1	13	2	22
Middlesex	1	11	2	18
Monroe	0	2	0	3
North Middleton	0	11	0	18
Silver Spring	0	1	0	2
South Middleton	7	74	12	123
Upper Allen	0	0	0	0

Source: Actual: Annual Building Activity reports, 2009-14, Tri-County Regional Planning Commission; Projected: Gannett Fleming, Inc.

Table 5-8 shows that industrial development activity, like commercial, did not significantly affect industrial land use acreage from 2008 to 2014. Again, the intended use of transitional lands under construction at the time of the land use classification update is not known.

Table 5-25 Industrial Land Use Trend

	2002	2008	2014	2002-08	2008-14
Industrial	1,000	727	709	-273	-18
Transitional (under construction)		87	130	87	43

Source: Tri-County Regional Planning Commission

Based on the trend, Lower Swatara could expect little change in demand for industrially zoned property. With roughly 200 acres available in the Industrial Park and Industrial Park-Limited districts, there may be no need for an increase in the amount industrial zoning.

However, property owners and developers have expressed interest in additional industrial development in the past two to three years, specifically lands zoned for warehousing and distribution centers along Fulling Mill Road and North Union Street which have easy access to PA 283. The available Industrial Park land is located along PA 441 near the Swatara Township border and the Industrial Park-Limited lands, located along the Airport Connector, do not permit warehousing and distribution centers. Therefore, the Township will need to consider if additional warehousing and distribution center development is desired and if so, where it is best to be located to minimize the impacts of truck traffic on the rest of the community.

Public/Non-Profit Development Trends

Table 5-10 presents public/non-profit development activity for the 2009-2014 period and projected activity for the 2015-2024 period based on the past trend. Such trends may follow population and residential land use trends but are often reflective of regional population and economic changes, not just local ones.

Lower Swatara's public/non-profit development activity was similar to southern Dauphin County municipalities and the rest of the municipalities with direct interstate access in the Capital Region for new development and slightly higher for improved and expanded public/non-profit uses. Lower Swatara is most similar to Silver Spring, South Middleton, and Upper Allen Townships, Cumberland County.

Table 5-26 Public/Non-Profit Development Trend

Public/Non-Profit	Actual		Projected	
	New, 2009-14	Improved/Expanded, 2009-14	New, 2015-2024	Improved/Expanded, 2015-2024
Southern Dauphin County				
Derry	3	63	5	105
Highspire	1	3	2	5
Hummelstown	1	3	2	5
Londonderry	0	4	0	7
Lower Swatara	2	13	3	22
<i>as percent of County</i>	5%	5%		
Middletown	1	14	2	23
Royalton	4	21	7	35
Swatara	2	2	3	3
<i>Area above as percent of County</i>	32%	44%		
Dauphin County	44	280	73	467
Other Dauphin County				
East Hanover	0	5	0	8
Middle Paxton	2	2	3	3
South Hanover	25	4	42	7
West Hanover	1	5	2	8
Cumberland County				
Lower Allen	0	5	0	8
Middlesex	1	4	2	7
Monroe	1	3	2	5
North Middleton	0	6	0	10
Silver Spring	1	12	2	20
South Middleton	2	19	3	32
Upper Allen	2	10	3	17

Source: Actual: Annual Building Activity reports, 2009-14, Tri-County Regional Planning Commission; Projected: Gannett Fleming, Inc.

Table 5-11 shows that public/non-profit development activity, like commercial, may have affected land use acreage from 2008 to 2014. It is known that the Middletown Home was reclassified to institutional. With this in mind, institutional land use acreage otherwise may have declined. Again, the intended use of transitional lands under construction at the time of the land use classification update is not known.

Table 5-27 Public/Non-Profit Land Use Trend

	2002	2008	2014	2002-08	2008-14
Parks and Recreation	21	51	73	30	23
Institutional	290	361	372	71	11
Transitional (under construction)		87	130	87	43

Source: Tri-County Regional Planning Commission

Based on this trend, Lower Swatara could expect little change in demand institutional uses over the next ten years. Lower Swatara permits many of these uses throughout its zoning districts, therefore even a more significant increase would not require a change in zoning.

The transportation system is a critical component of a community's infrastructure. It provides access to and circulation among the numerous local properties and coordinates with contiguous and regional or state facilities. This section characterizes the facilities of each travel mode found in the Township—road, transit, rail, air, and bicycle-pedestrian.

The Street, Road and Highway Network

The existing roadway network in Lower Swatara Township is very diverse including everything from winding, rural country roads, to residential subdivision streets, and high-speed limited access freeways. This has many positive and negative impacts on the surrounding community. The most heavily traveled roads in the Township are the limited access highways, which are owned and maintained by PennDOT or the PA Turnpike Commission. These include:

- Pennsylvania Turnpike (I-76)
- Interstate 283
- PA Route 283
- The Airport Connector

The Turnpike and PA Route 283 travel in an east-west direction through the Township and I-283 and the Airport Connector travel in a north-south direction. These roadways serve to connect businesses and residents of Lower Swatara Township to nearby cities such as Harrisburg and Lancaster as well as regional and national destinations like Pittsburgh and Philadelphia. They also serve significant amounts of through traffic and are all designated truck routes.

Major access points and junctions of these highways within the Township include:

- I-283 PA 283 / Turnpike Interchange
- Eisenhower Boulevard (S.R. 3001) / PA 283 Intersection
- PA 2831 S.R. 441 / Airport Connector Interchange
- Franklin D. Linn Interchange (North Union Street)

PA Route 230, known as West Harrisburg Pike in Lower Swatara Township, parallels the Susquehanna River and is another vital roadway corridor. PA 230 is also a designated truck route. Other important roadways within the Township include:

PennDOT Owned Routes

1. Oberlin Road (PA Route 441)
2. Fulling Mill Road (SR 3002)
3. Eisenhower Boulevard (SR 3001)

Township Owned and Maintained Routes

1. North Union Street (T-390)
2. Spring Garden Drive (T-337)
3. Stoner Drive (T-333)
4. Rosedale Avenue (T-382)
5. Longview Drive (T-386)
6. Lumber Street (T-380)
7. White House Lane (T-384)

Implications

- While the limited access highways provide regional access to and from the Township, they can also act as barriers to movement, particularly to north-south travel. This point was made in the Township's 2004 comprehensive plan, and a connection from PA 441 to Longview Road was recommended to improve north-south mobility. The land development plan for Phase III of Old Reliance included this connection as Powderhorn Road, which will be completed in 2016.

Highway Functional Classification

As mentioned above, Lower Swatara Township contains a wide variety of roads. Roadway functional classifications are a way to put these streets and highways into categories according to the service they are intended to provide and to define the role that streets or highways play in serving vehicles' trips through the transportation network.

Roadways in Lower Swatara Township represent all six of the following classifications; see Figure 7-1:

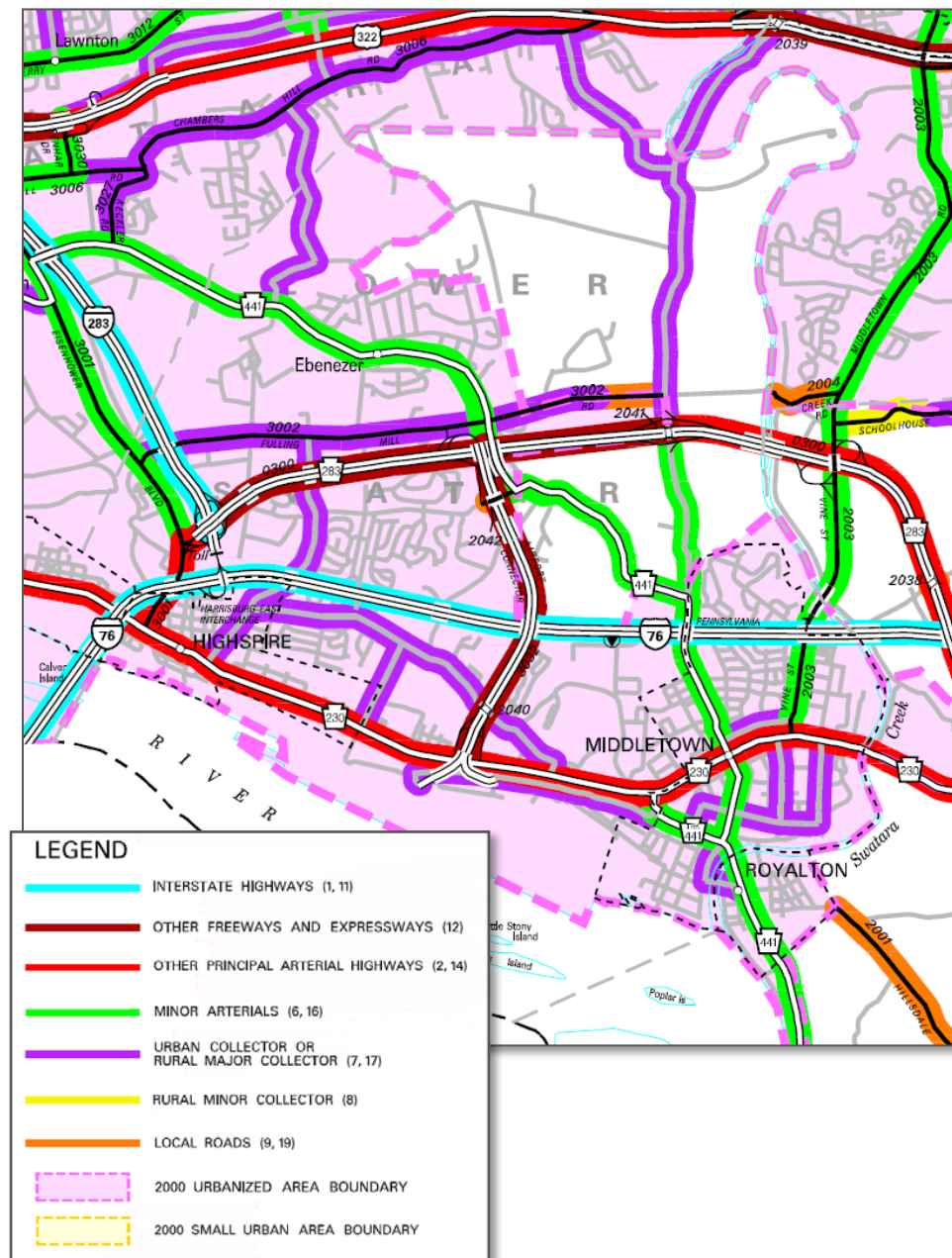
- **Interstate** - Limited access highways designed for traffic between major regional areas or larger urban communities of 50,000 or more. These highways extend beyond state boundaries, with access limited to interchanges located by the U.S. Department of Transportation.
- **Freeway** - Limited access highways designed for large traffic volumes between communities of 50,000 or more to regional traffic generators (such as central business districts, suburban shopping centers, and industrial areas). Freeways should be tied directly to arterial roads, with accessibility limited to specific interchanges to avoid the impediment of thru traffic.
- **Principal Arterial** - Roads that provide land access while retaining a high degree of thru traffic mobility and serve major centers of urban activity and traffic generation. These roadways provide a high speed, high volume network for travel between major destinations in both rural and urban areas.
- **Minor Arterial** - Roads that provide land access with a lower level of thru traffic mobility than principal arterials and serve larger schools, industries, institutions, and small commercial areas not incidentally served by principal arterials.
- **Collector** - Roads that collect traffic between local roads and arterial streets and that provide access to abutting properties. Collectors serve minor traffic generators, such as local elementary schools, small individual industrial plants, offices, commercial facilities, and warehouses not served by principal and minor arterials.
- **Local** - Roads that are local in character and serve farms, residences, businesses, neighborhoods, and abutting properties.

These functional classifications are sub-classified as urban or rural and are used to determine a roadway's eligibility for federal funding.

In addition to the Functional Classification System noted above, PennDOT further defines roadway classifications into Roadway Typologies. For Further Information regarding this

Roadway Typology method, refer to PennDOT Publication 13M Design Manual Part 2 Highway Design.

Figure 7-20 Functional Classification of State Highways



HATS 2040 Regional Transportation Plan (Long Range Plan)

The regional transportation plan for the Harrisburg Area Transportation Study or HATS describes the current status of transportation projects and funding programs, identifies long-term system needs, and recommends transportation projects to meet those needs. The long-range plan sets a framework and priorities for the distribution of federal transportation funds to local projects. The long-range plan is the 2040 RTP.

The current federal surface transportation legislation is FAST Act: *Fixing America's Surface Transportation (FAST) Act*, a transportation bill that authorizes federal highway, safety, transit, and rail programs over five years from federal fiscal years (FY) 2016 through 2020.

Current and Future PennDOT Improvements

PennDOT's [MPMS IQ](#) is an online database of programmed transportation projects. As of June 2016, MPMS IQ listed eight active projects, five projects programmed for future funds, and one candidate project for future funding.

Table 7-28 Transportation Improvements

Project ID	Title	Primary Improvement Type	Status
84548	PA-283/I-76 Interchange	Interchange Improvement	Active
87449	Fulling Mill Road	Resurface	Active
95378	ITS SMP Phase B Projects	Traffic System Management	Active
97278	Harrisburg Pike Resurface	Resurface	Active
102797	PA 283 Repair	Reconstruct	Active
105283	West Main St Ped Bridge	Transit System Improvement	Active
105485	Emaus St. Ext ROW	Transit System Improvement	Active
107284	Union St Bridge Repair	Bridge Rehabilitation	Active
99900	Oberlin Rd over Ramp	Bridge Preservation Activities	Programmed
99920	Rosedale Ave over Airport	Bridge Preservation Activities	Programmed
99945	Spring Garden Rd over Con	Bridge Preservation Activities	Programmed
100110	Airport Conn North Bound	Resurface	Programmed
100247	Harrisburg Pike Bridge 2	Bridge Replacement	Programmed
100184	Airport Conn South Bound	Resurface	Candidate

Source: PennDOT MPMS IQ

Pennsylvania Turnpike Improvement

The Union Street Bridge replacement project will accommodate the future widening of the Turnpike Mainline through the Township. The Mainline widening project is anticipated within the next 10-15 years.

Township Road Maintenance and Improvement

Lower Swatara Township receives revenue annually from the Commonwealth's Liquid Fuels Tax Program. This program allocates a portion of the tax collected from the sale of liquid fuels (i.e. gasoline and oil) to municipalities in order to supplement funding for local roadway improvements and emergency services' fuel expenses. The amount received by each municipality is based upon the number of local roadway miles. Currently there are 42 miles of Township roadways in Lower Swatara. The Township conducts activities such as street sweeping, leaf removal, snow plowing, crack sealing, storm drain repairs, and other maintenance activities for these roadways. The Township also reviews the conditions of its roadways frequently in order to determine the need for resurfacing and drainage improvements utilizing visual inspection techniques.

The Township has an ongoing program of roadway rehabilitation and improvement. Over the last ten years, the following major improvements have been completed:

- Road widening has been completed on significant portions of Fulling Mill Road.

- The relocation of Meade Avenue.
- Powderhorn Road has been extended to Longview Drive and will be paved in 2016.
- Two new signals were installed at Union Street and I-283 ramps due to increased traffic from land development.
- Fulling Mill Road and North Union Street intersection was modified including revised striping/lane configurations.
- The relocation of Lawrence Street.

In general, Township roadways are in fair to good condition. The primary roadways previously listed herein have an adequate cart way width and most have some shoulder, though widths vary. The primary Township roadways are marked with double yellow centerlines and some have white edge lines. In the northern part of the Township, truck and/or weight restrictions are present on the Township roads connected to PA 441, Fulling Mill Road, and North Union Street, except for Turnpike Industrial Park Drive.

Improvements are needed to facilitate increased safety, promote growth, and accommodate the growing needs of the community, particularly on Longview Drive, Strites Road, and Gockley Road, but also on other Township roadways where substandard geometric conditions exist.

Advances in technology have made the collection of roadway and roadside conditions more cost effective. A comprehensive Transportation Asset Management and Capital Improvement Plan can be a useful tool to expend these limited transportation dollars in the most effective manner.

Traffic Signals

The Township is the owner and responsible party for the operation and maintenance of traffic signal installations at the following intersections:

1. Union Street and PA 283 Eastbound Ramps
2. Union Street and PA 283 Westbound Ramps
3. Meade Avenue and Olmstead Plaza
4. Eisenhower Boulevard and Fulling Mill Road
5. Eisenhower Boulevard and S.R. 0283 Extended
6. Fulling Mill Road and S.R. 0441 (Oberlin Road)
7. Fulling Mill Road and North Union Street
8. S.R. 0230 and Whitehouse Lane
9. S.R. 0230 and Airport Connector Southbound Ramps
10. S.R. 0230 and Olmsted Plaza
11. S.R. 0230 and First Street
12. S.R. 0230 and Ann Street

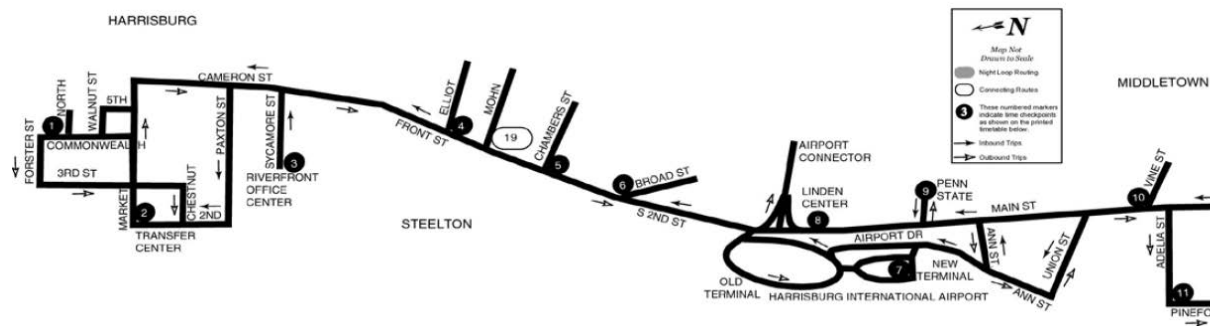
Additionally, Lower Swatara Township shares responsibility for the operation and maintenance of a traffic signal at S.R. 0230 and Wood Street with Middletown Borough.

Implications

- The Township should implement an asset management plan for its roadway system along with a fiscally constrained pavement management plan. Advances in technology have made mobile scanning of roadways for condition assessment cost effective and provides an excellent platform for which the Township can develop a robust pavement management program, which includes not only rehabilitation but also preventative maintenance.
- As roadways are improved, minimum cart way, proper drainage, and shoulder widths consistent with PennDOT 3R Design Criteria should be implemented.
- Warning signs should be consistently utilized to advise motorists of safety hazards until feasible improvements can be made.

Public Transit Services

Figure 7-1 CAT Route #7



Source: Capital Area Transit

The Cumberland-Dauphin-Harrisburg Transit Authority, also known as Capital Area Transit (CAT), provides fixed route bus services throughout the Harrisburg area. Currently, CAT's Route #7 provides service between Harrisburg, Steelton, Harrisburg International Airport, Penn State Harrisburg, and Middletown with (#) stops in Lower Swatara Township. Buses run this route from approximately 5:30 AM to 8:15 PM on weekdays and from approximately 6:15 AM to 7:45 PM on Saturdays. Buses do not currently run on Sundays. CAT #7 has a Transfer Center at the Middletown Amtrak Station. CAT routes change periodically based on service demand and efficiency. See Figure 7-3.

CAT also provides programs such as Share-A-Ride and Special Efforts Transportation (SET) for people with special needs. Share-A-Ride provides door-to-door rides for senior citizens, people with disabilities, and other individuals in Dauphin County. SET operates along with regular bus routes and provides service for individuals who are unable to board a regular bus. CAT also has a Free Transit for Senior Citizens Program and a Reduced Transit Fare Program for people with disabilities.

There are no Park and Ride Locations in Lower Swatara. Residents can access Capitol Trailways and Greyhound intercity bus services by taking the #7 route to the Harrisburg Transportation Center.

CAT also offers RideEco in conjunction with Amtrak, the Southeastern Pennsylvania Transit Authority, the Port Authority Transit Corporation, New Jersey Transit, DART First State (Delaware Transit Corporation) and other transit providers. This program allows employers throughout eastern Pennsylvania, New Jersey, and Delaware to provide tax-free transit vouchers for their employees. These vouchers can be provided as an employer-paid benefit, as a pre-tax payroll deduction, or a combination of the two and can be used to purchase transit tickets, tokens, and passes. Some vanpool services also accept RideEco.

Implications

- Park-n-ride lots could help to alleviate congestion regional roadways. CAT could study demand and potential locations.

Rail Transportation

Rail-Freight Transportation

Class I rail freight service and infrastructure in the Capital Region are operated by Norfolk Southern Corporation. The Norfolk Southern lines run along the airport grounds. The local shortline operator, Middletown & Hummelstown Railroad (M&H), is a private railroad operating freight transfer or staging service from local shippers to the Norfolk Southern lines. It also operates passenger service between Middletown and a station outside of Hummelstown near Indian Echo Caverns as a tourist attraction.

Rail-Passenger Transportation

Passenger rail service in the Harrisburg area is provided by the National Railroad Passenger Corporation, also known as Amtrak, with the main station located at the Harrisburg Transportation Center at 4th and Chestnut Street in downtown Harrisburg. The nearest secondary station is located in Middletown. Amtrak service is available for commuters to cities such as Philadelphia and as far as New York.

While these stations provide Township residents with access to regional and national destinations, they do not currently serve commuter traffic in and around Central Pennsylvania. This system will undergo a major change in 2016 when a new train station and multi-modal transportation center are constructed adjacent to Ann Street in Middletown. This facility will be connected to the Penn State University Campus via a pedestrian bridge. The multi-modal transportation center is expected to accommodate commercial uses and public transit providers, hotel shuttle vans, limousines, rental cars, and taxis and will include a parking garage. Upon completion of the multi-modal facility, Amtrak will close the existing Middletown station.

Although prominent in the last Comprehensive Plan, commuter rail has met political opposition to its implementation. As such, CorridorOne and other regional commuter rail proposals have been shelved for the time being. Such a system could significantly increase passenger rail travel in Central Pennsylvania and could have a positive impact on roadway traffic congestion.

Implications

- Access to passenger rail service and nearby traveler-oriented services will dramatically improve with the completion of the new multi-modal transportation center.

Aviation Facilities and Services

Lower Swatara Township contains central Pennsylvania's largest airport facility, Harrisburg International Airport (HIA). HIA was originally established as a U.S. Army base in 1898 and later became Olmsted Air Force Base. When the Air Force base was decommissioned in 1969, the land was turned over to the Commonwealth of Pennsylvania and a public airport was created. In 1998, ownership of the airport was transferred to the Susquehanna Area Regional Airport Authority (SARAA), which oversees operations of the facility. Lower Swatara Township holds one of fifteen member seats on SARAA's board of directors.

HIA currently comprises approximately 800 acres along the Susquehanna River, which is a relatively small area when compared with similar facilities. HIA's location along the River helps minimize noise impacts to surrounding neighborhoods, as flight patterns are oriented along the River. Seventy-four (74) of the 800 acres make up the Terminal Complex. This includes the passenger terminal, aircraft parking apron, circulation roadways, rental car facilities, and short-term parking. The long-term (economy) parking area is located to the east of the Terminal Complex. Additional parking is available from private vendors off-site. The Airport has its own full-time police and fire departments as well as its own water and sewer systems. HIA is currently working with Township officials to develop a new zoning overlay for the Airport area. This overlay could alleviate certain restrictions that exist in the standard zoning ordinances, such as those regarding building height, in order to facilitate development around the Airport.

In accordance with their Master Plan, SARAA is currently undertaking major upgrades and expansions to many of the facilities at HIA. To date, these projects have included demolition of ten former military buildings, the addition of 1,400 parking spaces at the Smart Park Shuttle Lot, and site grading and utility work in the Terminal Complex area. Upcoming construction will include new and relocated taxiways, renovation and expansion of the existing passenger terminal, a new terminal facility, new air cargo aircraft parking areas, new hangars and support facilities, improvements to on-site roadways, the new multi-modal transportation center, and other improvements. These activities indicate that HIA will continue to grow in upcoming years and may present economic development opportunities for the Township.

Implications

- HIA appears to have a steady future serving the Capital Region with passenger and air freight services.

Pedestrian and Bicycle Systems

While the Township does not currently contain any public rail-trail, greenway, or hiking trail facilities, a number of these recreational facilities are nearby and are available to Township residents. These facilities include the:

- Appalachian Trail, a hiking trail from Maine to Georgia, Pennsylvania section travels north and west of Harrisburg;
- Capital Area Greenbelt, a multi-use trail, including some on-road sections, in and around the City of Harrisburg;
- Conewago Recreational Trail, a multi-use trail along Conewago Creek near Elizabethtown, Lancaster County;
- Jonathan Eshenour Memorial Trail in Derry Township

Lower Swatara Township's geographic location provides great opportunity to increase the connectivity among these regional facilities and to increase Township residents' accessibility to them.

In terms of walking and bicycling active (physical) modes of transportation, facilities are located sporadically throughout the Township. Existing sidewalks are generally in good condition, however, there are no striped bicycle lanes in the Township and roadway design varies greatly with regard to bicycle-related features (i.e. shoulders, curb lane widths, etc.).

Implications

- Walking and bicycling facilities that connect residential and commercial areas could improve quality of life in the Township.

Like transportation infrastructure and services, water utilities are a key factor in the location and intensity of development. This section characterizes the water, sewage, and stormwater systems in Lower Swatara Township.

Public Water Infrastructure and Service

In Lower Swatara Township, public water is provided by Suez, formerly United Water Pennsylvania. Suez serves over 98,000 people in the Harrisburg area and over 5,000 people in Lower Swatara Township.

Suez acquires the water for service to the Township from three main sources: by drawing raw water from Swatara Creek to its treatment plant in Hummelstown; by drawing raw water from Stony Creek and the Susquehanna River to its Sixth Street Water Treatment Plant in Harrisburg; and from water purchased from a private well owned by the Susquehanna Area Regional Airport Authority (SARAA). The Harrisburg water treatment plant can generate up to 12 million gallons of water per day, while the Hummelstown water treatment plant can generate up to 4 million gallons of water per day. Lower Swatara Township receives approximately 90% of its treated water from the Hummelstown plant and 10% from the Harrisburg plant. The well owned by SARAA provides water for the airport and is connected to Suez system. Suez does not have any specific plans for expansion, but they have the capability to expand their services in the region as necessitated by development.

Though the water pressure constantly fluctuates, the water pressure in the Township is generally between 55-70 pounds per square inch. Storage facilities within Lower Swatara Township include a 1 million gallon tank near the airport and a 300,000-gallon tank along Spring Garden Drive. Suez tests its water regularly to ensure that it meets all health and safety standards set by the United States Environmental Protection Agency (EPA) and the Pennsylvania Department of Environmental Protection (PADEP).

Many residents in Lower Swatara Township currently acquire fresh water from private wells, since public water service is not available to their properties. In some cases, limited service areas are due to the high costs of service area expansion. Some residents have expressed a desire to connect to the public water system if and when it becomes available. A few residents have concerns about groundwater quality.

Water usage and availability is a chief concern within many Central Pennsylvania communities given the drought conditions that have been experienced in recent years. Pennsylvania's relative lack of well regulations also contributes to concerns that new wells could be created that would reduce the viability of existing wells.

In addition, continued suburban development into previously rural and agricultural lands raises concerns over water quality and groundwater recharge. In fact, the October 1997 *Swatara Creek Greenway & River Conservation Plan* prepared for the Dauphin County Parks and Recreation Department indicated, "The primary threat to the lower Swatara [Creek] is increasing urbanization, the major contributor to high coliform levels."

See Map 3 for public water service areas.

Implications

- Suez does not have any specific plans for service area expansion but has the capability to expand as necessitated by development.
- Some residents who rely on private wells have expressed a desire to connect to the public water system if and when it becomes available. A few residents have concerns about groundwater quality.
- Drought conditions and Pennsylvania's relative lack of well regulations contribute to concerns that new wells could be created that would reduce the viability of existing wells.

Public Sewer Infrastructure and Service

The Municipal Authority of Lower Swatara Township provides public sewer service for the Township. There are over 40 miles of sewer lines providing service for 2,200 customers. At the end of 2014, the sewer system provided service for nearly 3,900 equivalent dwelling units (EDUs) for residential and commercial use. Lower Swatara Township does not have its own wastewater treatment plant (WWTP), but rather the wastewater is distributed to three separate WWTPs in neighboring municipalities: the Highspire Borough Authority WWTP, the Middletown Borough WWTP, and the Derry Township Municipal Authority WWTP.

The Municipal Authority of Lower Swatara Township has performed a number of improvements to its collection and conveyance system recently in order to reduce the amount of extraneous inflow and infiltration from entering its sewer system. This reduction can be seen in the lower average flow per EDU now as compared to the previous comprehensive plan update.

Highspire Borough Authority treats the majority of the Township's wastewater. The total permitted capacity of this WWTP is 2.0 million gallons per day and treated water is discharged into the Susquehanna River. The WWTP was upgraded in 2012 in support of Pennsylvania's strategy to reduce pollution within the Chesapeake Bay, the \$10 million upgrades to the treatment plant reduced nutrient discharge levels through an improved biological removal process. The Municipal Authority of Lower Swatara Township is financially responsible for 64 percent of the WWTP's capital, operation, and maintenance costs. Likewise, they have accessibility to 64 percent of its capacity. The Township is allotted up to 1.28 million gallons per day of wastewater. In 2014, Lower Swatara conveyed an average daily flow of 0.737 million gallons per day. Based on the 2014 average flow per EDU of 244.7 gallons per day, Lower Swatara Township has approximately 2,200 EDU's of available capacity.

Middletown Borough services the southeastern portion of the Township, including the areas such as Penn State, Olmstead Plaza, and the Middletown Area High School. The total permitted capacity of this WWTP is 2.2 million gallons per day and treated wastewater is discharged into the Susquehanna River. The WWTP was upgraded in 2012 in support of Pennsylvania's strategy to reduce pollution within the Chesapeake Bay, the \$12 million

upgrades to the treatment plant reduced nutrient discharge levels through an improvement biological removal process. The Authority entered into new 20-year sewage treatment agreement with the Middletown Borough Authority in 2009. In 2014, the Middletown Borough Authority and Middletown Borough entered into a 50-year Municipal Water and Wastewater Utility System Concession and Lease Agreement with Middletown Water Joint Venture LLC. The terms of the 2009 Sewage Treatment agreement between the Authority and Middletown Borough Authority remain in effect. The 2009 sewage treatment agreement provides the Authority with 0.44 million gallons per day of capacity or 20%. Likewise the Municipal Authority of Lower Swatara Township is financially responsible for 20 percent of the WWTP's capital, operation, and maintenance costs. In 2014, Lower Swatara conveyed an average daily flow of 0.181 million gallons per day. Based on the 2014 average flow per EDU of 286.6 gallons per day, Lower Swatara Township has approximately 900 EDU's of available capacity.

Derry Township Municipal Authority services the northeastern portion of the Township, including the area along N. Union Street north of PA Route 283, and most of Fulling Mill Road east of PA Route 441 by providing treatment at its Southwest WWTP. The total permitted capacity of this WWTP is 0.6 million gallons per day and treated water is discharged into the Swatara Creek. Unlike the Highspire and Middletown WWTP's, the Township purchases capacity in the Southwest WWTP as new sewer service capacity request are received in this drainage basin and pays monthly sewer rentals based on the flow conveyed. At the end of 2014, the Township's capacity is 0.101 million gallons per day. In 2014, Lower Swatara conveyed an average daily flow of 0.068 million gallons per day.

As shown on Map 3, there is a very small percentage of the Township that is not incorporated into the public sewer system. These areas are relatively undeveloped and are treated by individual on-lot septic systems owned and maintained by the property owner. The Township is not aware of any residents who are currently discontented with their on-lot septic systems and want to switch to the public sewer system.

The Pennsylvania Sewage Facilities Act of 1966 as amended, commonly referred to as "Act 537," is the primary law controlling individual and community sewage disposal systems. Act 537 requires that every municipality prepare and maintain a sewage facilities plan. Act 537 requires municipalities to review their official plans at five-year intervals and perform updates, as necessary. Municipalities can apply to the PADEP for up to 50 percent reimbursement of the cost of preparing an Act 537 Plan.

High growth municipalities are frequently performing updates to their Act 537 Plan. For stable or slow growth municipalities, 20 years or more may elapse between editions. Regardless of timing, such plans and their approval by PADEP are needed before any major sanitary sewer projects are eligible for funding by the state. The Township's Act 537 Plan was last revised in 1983. The Plan focuses mainly on issues and new developments at that time. It would be appropriate for the Township to consider an update to the Act 537 Plan in the near future to plan for future sanitary sewer needs in the Township. When the Act 537 Plan is updated, the Plan may include a requirement for the inspection and maintenance of on-lot septic systems, a wellhead protection program, and a water quality testing program to ensure that the well water meets all health and safety standards set by

the United States Environmental Protection Agency (EPA) and the Pennsylvania Department of Environmental Protection (PADEP).

Implications

- The Municipal Authority of Lower Swatara Township has performed a number of Improvements to the collection and conveyance system have reduced the amount of extraneous inflow and infiltration from entering its sewer system and thereby reduced the volume of water conveyed for sewer treatment.
- The Township has capacity for additional sewage treatment: approximately 2,200 EDU's at the Highspire plant; approximately 900 EDU's at the Middletown plant; and additional treatment capacity at the Derry Township plant via contract, as needed.
- The Sewage Facilities Plan update should be completed and implemented.

Stormwater Infrastructure and Service

Stormwater management has become increasingly regulated through the implementation of the federal Clean Water Act and the state Chesapeake Bay Strategy. Each municipality with a separate municipal storm sewer system (MS4) is required to adopt development and other regulations consistent with its permit issued under the National Pollutant Discharge Elimination System (NPDES) and the county integrated water resources plan, and to implement programs and practices to control polluted stormwater.

Lower Swatara Township has municipal stormwater regulations (Chapter 26, Water, of the Township Code of Ordinances) in addition to traditional subdivision and land development requirements. The ordinance intends not only to provide design, construction, and maintenance criteria for permanent onsite stormwater management facilities, but also to regulate the modification of the natural terrain and existing drainage patterns that determine surface water flows.

The Township has put programs and practices in place in support of stormwater management. In partnership with the Dauphin County Conservation District, and in association with its NPDES permit, Lower Swatara Township has established a program to reduce pollutants in stormwater runoff for new construction disturbing one or more acres. The program includes:

- An ordinance,
- Requirements to implement erosion and sediment control best management practices (BMPs),
- Requirements to control other waste at the construction site,
- Procedures for reviewing construction site plans,
- Procedures to receive and consider information submitted by the public, and
- Procedures for inspections and enforcement of stormwater requirements at construction sites.

The Township addresses post-construction stormwater runoff from new development and redevelopments that disturb one or more acres through other measures:

- strategies to implement a combination of structural and non-structural BMPs, such as grass swales, infiltration trench/seepage pits, rain gardens, and storm water basins,
- an ordinance to address post-construction runoff, and
- a program to ensure adequate operation and maintenance of BMPs.

In addition, the Township has trained its staff to prevent and reduce stormwater pollution from activities like maintaining storm sewer infrastructure and performing daily municipal activities, such as road maintenance, street sweeping, and cleaning of storm drains.

The Township also provides information to its citizens about pollution reduction at home and in the neighborhood. Information is made available on the Township website and at the Township office.

The Township is beginning to evaluate the impact of these relatively new programs and practices. In compliance with its NPDES permit, the Township will report its progress and refine its efforts to reduce stormwater pollutants and improve water quality.

Implications

- The Township should continue to document, evaluate and refine its stormwater programs and practices.

Community facilities and services are those services and facilities provided by both public and private sector entities for the health, safety and welfare of the community. This section identifies these services and trends in service demand and change.

Community Facilities and Services

Police

The Lower Swatara Police Department employs nine Patrol Officers, three Sergeants, two Detectives, one School Resource Officer, and the Chief of Police.

The Chief of Police stated that there has been relatively little crime in the Township in recent years. Property crime is on the decline, however fraud, identity theft, and credit card misuse has been on the rise. Traffic safety has been improving as cars have more built-in safety technology. Driver error remains the cause of most crashes. Fortunately, local drivers are familiar with the hazardous locations and drive cautiously.

Fire Protection

The Lower Swatara Fire Department is a volunteer organization providing fire protection and ambulance services. The Department owns and maintains all fire-fighting apparatus and the Fire Hall at 1350 Fulling Mill Road. Calls for service from 2012 through 2014 averaged 535 per year.

Medical

Residents of the Township have regional access to two health systems. The Penn State Hershey Health System is based in Derry Township. PinnacleHealth is based in Harrisburg. Both offer hospitals and other medical facilities within minutes of Lower Swatara. However, there is no medical or urgent care clinic in the Middletown area.

Education

The Middletown Area School District serves Lower Swatara Township, Middletown Borough, and Royalton Borough. Enrollment in Fall 2015 was 2,427 students. The racial and ethnic composition of students is much more diverse than that of the Township. Districtwide, families are economically challenged, with 51.3 percent qualifying for free or reduced lunch in Fall 2015.

The school district operates three elementary schools (grades K-5), one middle school (grades 6-8), and one high school (grades 9-12). The Lyall J. Fink Elementary School is located in Middletown and was renovated in 2007-08. The John C. Kunkel Elementary School is located on Fulling Mill Road. The Robert G. Reid Elementary School, the Middle School, and the High School South are located on a connected campus. Reid Elementary was completed in 2002. The Middle School was completed in 2007. The District is currently constructing a new high school, which will open for the 2016-2017 school year.

All students living in Lower Swatara are bussed to school.

Private Catholic education for pre-kindergarten through grade 8 is available at the Seven Sorrows of the Blessed Virgin Mary School on East Water Street, Middletown.

The nearest public library is the Middletown Public Library on North Catherine Street in Middletown. The William H. & Marion C. Alexander Family Library in Hummelstown is the nearest branch of the Dauphin County Library System.

Penn State Harrisburg is an undergraduate college and school of the Penn State University. It offers more than 65 associate, bachelors, masters, and doctoral degree programs. The student body of more than 4,400 students is increasingly diverse in race, ethnicity, and origin. Campus alumni now total more than 35,000—a significant network of professionals with connections to the Middletown area.

The Penn State Harrisburg campus spans the Lower Swatara-Middletown border on lands once part of the Olmsted Air Force Base. The campus hosts facilities for academic instruction, residence halls, student affairs and student life services, and athletics. Off-campus student housing is available adjacent to the campus and within a 20-minute walk.

The campus is patrolled by the Department of Safety and Police Services to enforce state laws and University rules and regulations.

Penn State Harrisburg is one of the hubs of the Harrisburg Market Keystone Innovation Zone, making certain business ventures eligible for tax incentives.

Utilities

Electric utilities are provided by PPL Electric Utilities.

Natural gas service is available through UGI.

Land-based telecommunications are provided by Verizon and Comcast.

Solid Waste and Recycling

Lower Swatara provides mandatory residential trash and recyclables collection and disposal services through its designated contractor. Commercial, industrial, and institutional establishments are ineligible for service through the Township contract. Lower Swatara contracts with a single hauler for curbside collection of trash and recyclables.

Parks and Recreation

Lower Swatara owns and maintains eight municipal parks with facilities. Memorial Park and Greenfield Parks are its largest, developed for baseball and soccer, respectively. Shopes Gardens and Woodridge have additional baseball fields. Greenwood Commons has a nature area. Other parks are neighborhood parks with play equipment, pavilions and picnic tables, and grass fields. See Table 9-1 and Map 4.

In 2015, the Township acquired land at the east end of Fulling Mill Road. A public water access may be developed there, but there are no formal plans to date.

Table 9-29 Township Parks

Township Park	Facilities	Size (acres)
Georgetown Park	Playground, and picnic facilities	2.0
Greenfield Park	Soccer, playground, picnic and walking path facilities	20
Greenwood Commons Park and Nature Area	Playground and picnic facilities; nature area	2.4
Memorial Park	Baseball, softball, basketball, tennis, playground, and picnic facilities	16.1
Old Reliance Park	Basketball, playground, and picnic facilities	8.4
Rosedale Park	Basketball, playground, and picnic facilities	0.6
Shope Gardens Park	Baseball, basketball, playground, and picnic facilities	3.5
Woodridge Park	Baseball, playground, and picnic facilities	5.1
Fulling Mill Road site	Acquired in 2015; undeveloped land along Swatara Creek, in the floodplain	10.8
Total		68.9

Source: Lower Swatara Township

Implications

- The demand for Township and community services has not changed significantly in recent years due in part to slow population and household growth. If slow growth continues, demand can be expected to remain steady in overall size or volume but may change in other ways related to its demographics.

Appendix C

Inventory Maps

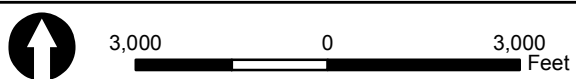
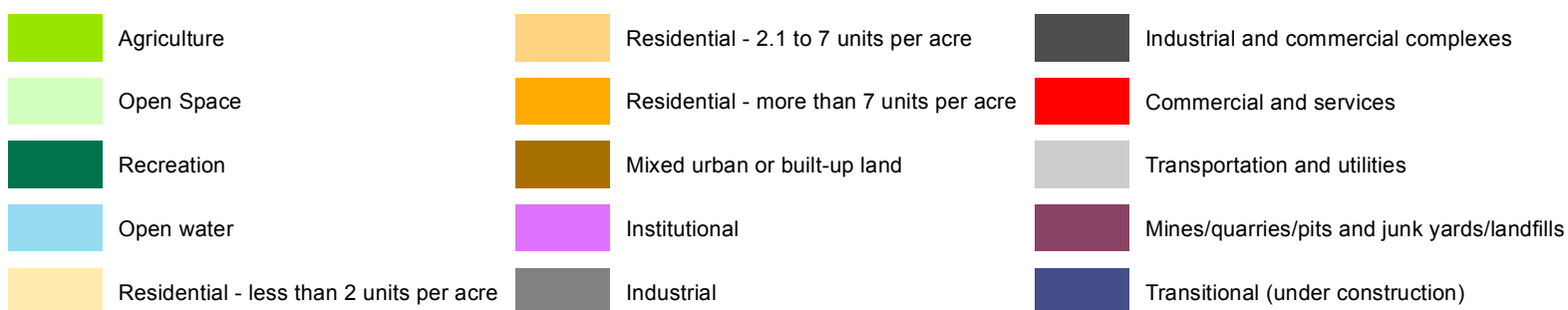
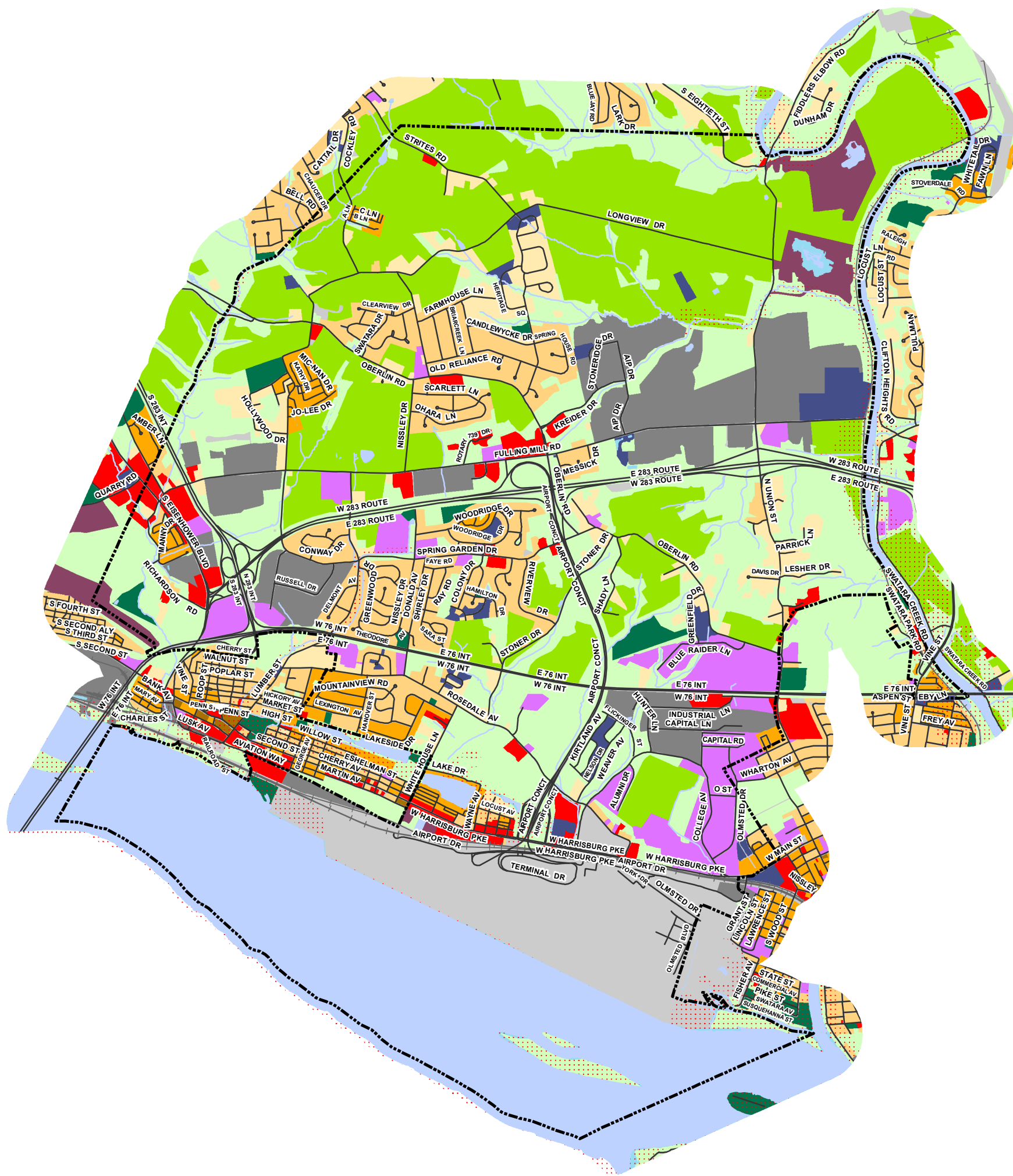
2014 Land Use

Significant Changes in Land Use, 2008-2014

Water and Sewer Service Area

Parks and Public Lands

Future Land Use Map








Mapping derived from data provided by Dauphin County, TCRP, FEMA, and ESRI.

2/5/2016	PM: CKB	GIS: BLS	QA: HSH	R001501.0425
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 Railroad
 Street
 FEMA 1% Annual Chance Floodplain
 Waterbody
 Municipal Boundary

2014 Land Use

Lower Swatara Township

Dauphin County, Pennsylvania







3,00003,000
Feet


Mapping derived from data provided by Dauphin County, TCRP, FEMA, and ESRI.


2/5/2016PM: CKBGIS: BLSQA: HSHR001501.0425






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717.564.1158 [fax]
www.hrg-inc.com

-  Land Use Change From 2008 to 2014

 FEMA 1% Annual Chance Floodplain

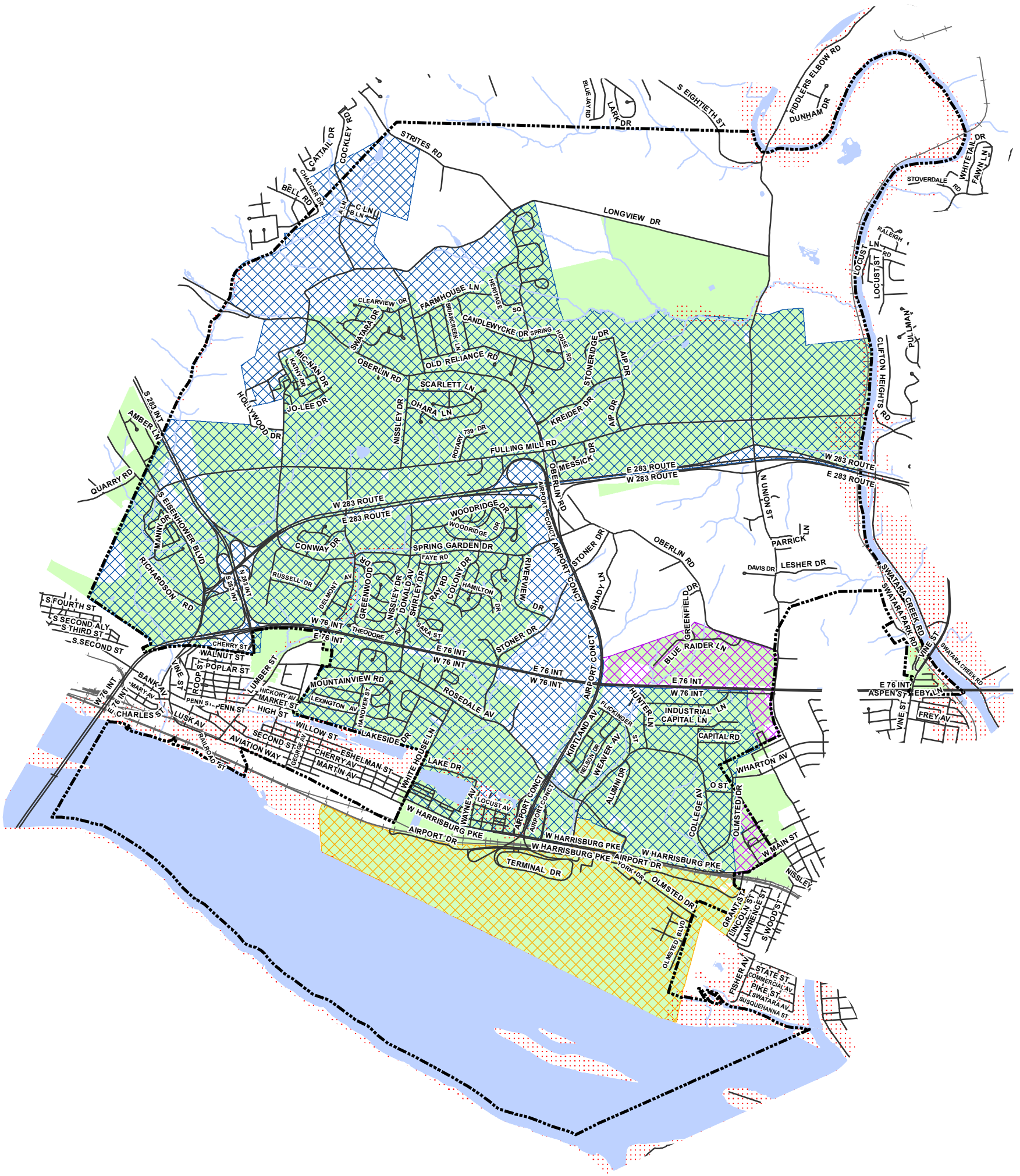
 Waterbody

 Municipal Boundary
-  Railroad

 Street

Significant Changes in
Land Use 2008-2014
Lower Swatara Township
Dauphin County, Pennsylvania

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3,000 0 3,000 Feet

Mapping derived from data provided by Lower Swatara Township, Dauphin County, FEMA, Suez Water, and ESRI.

2/5/2016 PM: CKB GIS: BLS QA: HSH R001501.0425



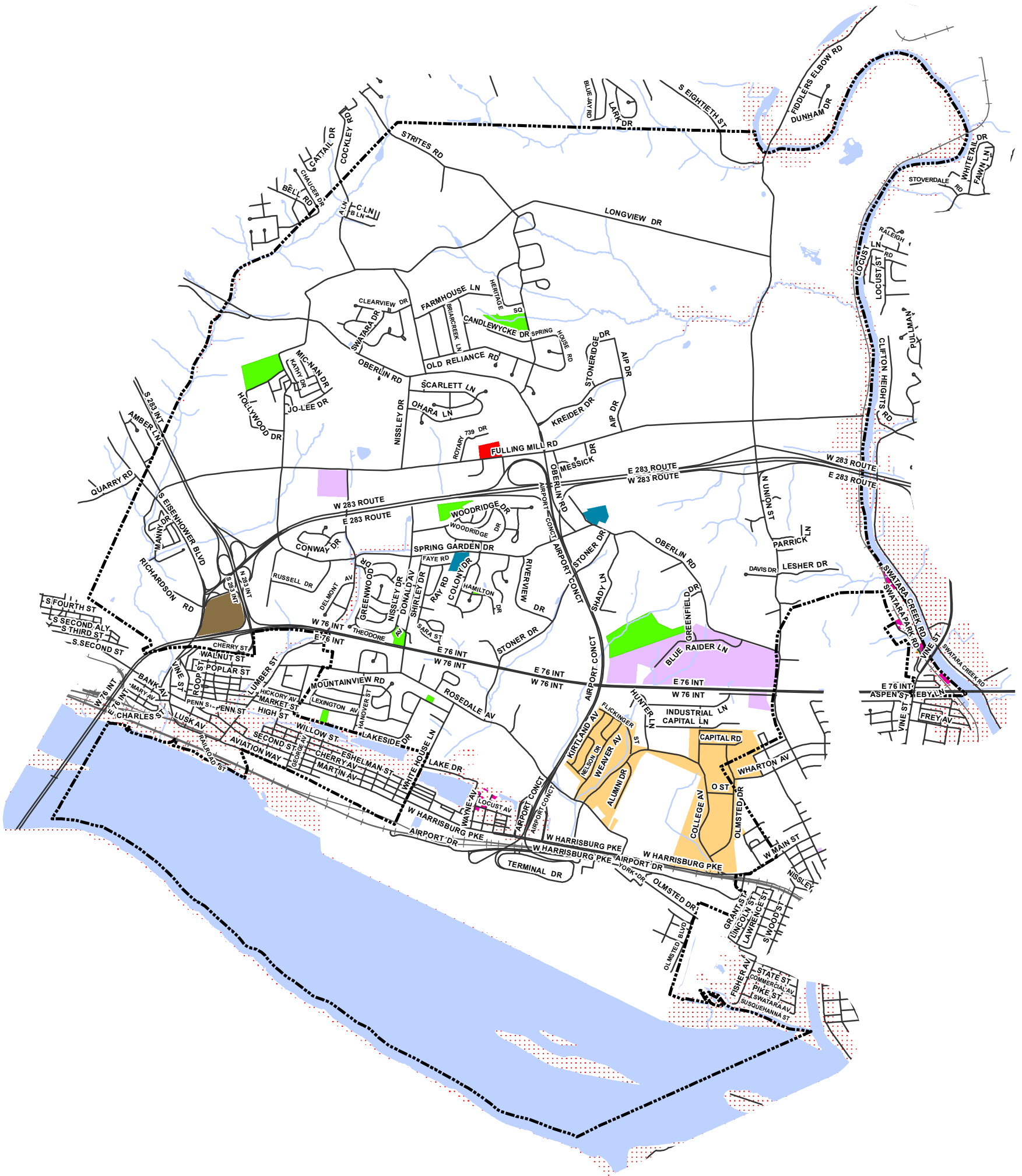
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717.564.1158 [fax]
www.hrg-inc.com

- Sanitary Sewer Service Area
- Suez Water Service Area
- Suez Middletown Water Service Area
- SARAA Water Service Area
- Railroad

- Street
- FEMA 1% Annual Chance Floodplain
- Waterbody
- Municipal Boundary

Water and Sewer Service Areas

Lower Swatara Township
Dauphin County, Pennsylvania



3,000 0 3,000 Feet

Mapping derived from data provided by Dauphin County, FEMA, and ESRI.

2/5/2016 PM: CKB GIS: BLS QA: HSH R001501.0425



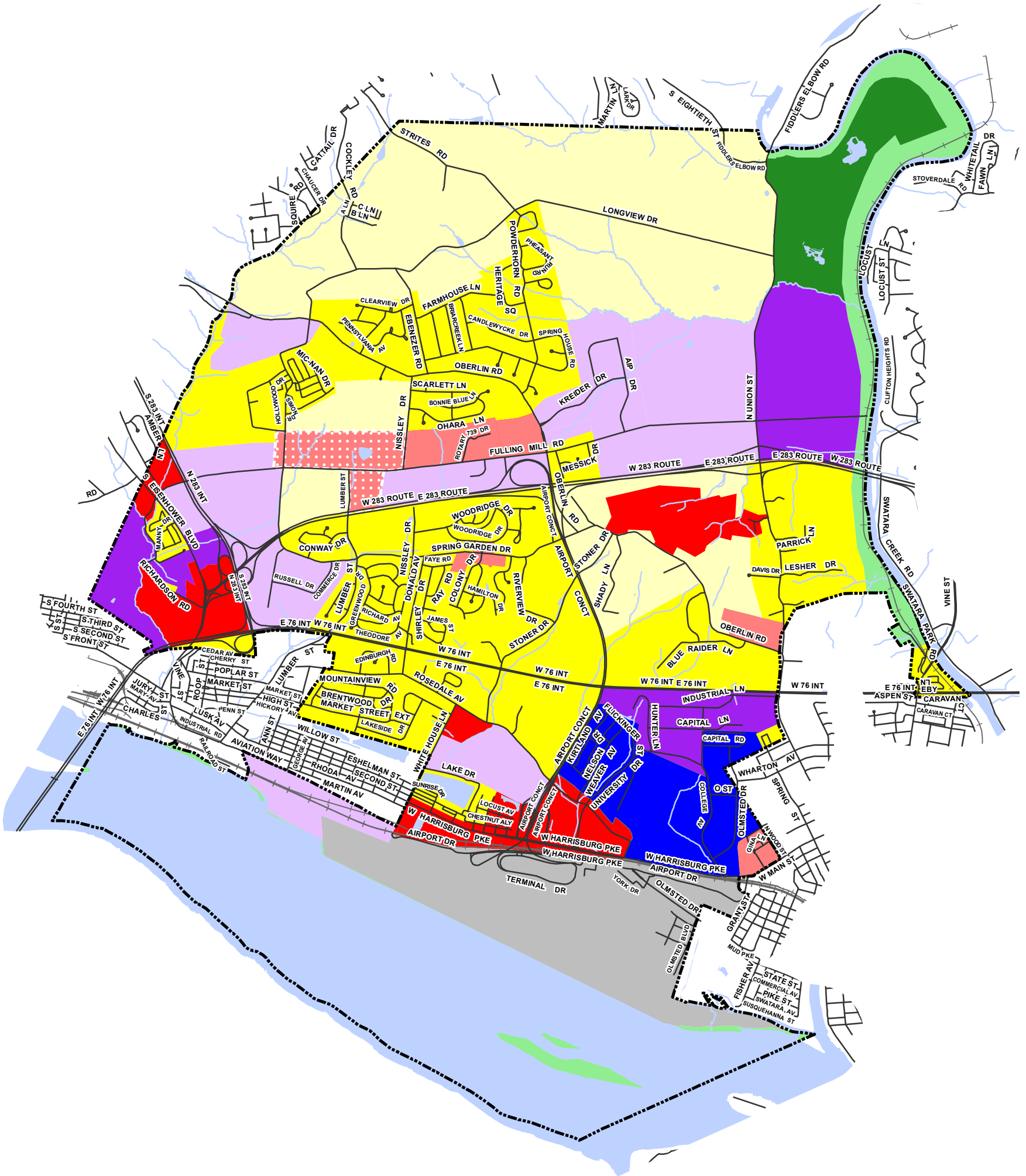
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- | | |
|---|------------------------------------|
| Hazard Mitigation Grant Properties | Pennsylvania State University Land |
| Lower Swatara Fire Department | Pennsylvania Turnpike Land |
| Lower Swatara Township Land | Railroad |
| Lower Swatara Township Municipal Authority Land | Street |
| Middletown Area School District Land | FEMA 1% Annual Chance Floodplain |
| Park | Waterbody |
| | Municipal Boundary |

Parks and Public Lands

Lower Swatara Township

Dauphin County, Pennsylvania



Future Land Use
 Commercial, Office, and Retail
 Commercial Neighborhood
 Airport Industrial
 Conservation

Institutional
 Intensive Industrial
 Light Industrial
 Natural Resource-related
 Residential

Residential Agricultural
 Recommended Rezoning to Commercial Neighborhood

3,00003,000
Feet

Mapping derived from data provided by Dauphin County, TCRP, and ESRI.

8/23/2017PM: EJSGIS: BLSQA: HSHR001501.0425

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Railroad

Street

Waterbody

Municipal Boundary

Future Land Use
Recommendations for Zoning Change
as shown on the Township Zoning Map
Lower Swatara Township
Dauphin County, Pennsylvania

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