

ISO Community  
Analytic Services



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# Community Fire Service Performance Review - Structural Fire Protection

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Prepared for  
Upper Providence Township  
Fire Service

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October 7, 2014

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## 1.0 Executive Summary

**Table 1: Executive Summary**

Section	Assessment	Key Findings
<b>Company Deployment</b>	 Average performance	Station coverage for residential and commercial properties is reasonable with opportunity for improvement in the township center during non-business hours when the “Public Works” engine is not staffed.
<b>Public Protection Classification</b>	 Strong performance	Strong performance compared to peers, state, and national averages. Areas of focus should include staffing and training.
<b>Performance</b>	 Room for improvement	According to NFIRS statistics, fire severity is high compared to the peer and state average. Consideration should be given to the implementation of a community fire risk assessment.
<b>Prevention</b>	 Room for improvement	Fire frequency is higher than peer, state, and national averages.
<b>Personnel</b>	 Room for improvement	PPC™ points for personnel are lower than the peer, state, and national average. Retention and recruitment programs can help by increasing the level of staffing.
<b>Training</b>	 Average performance	PPC™ points for training is comparable to peers and better than the state and national average. Performance can be improved with strong documentation and a company-level pre-incident plan strategy.
<b>Building Code</b>	N/A	Upper Providence Township declined to participate in ISO’s Building Code Effectiveness Grading Schedule (BCEGS®).
<b>Commercial Property</b>	N/A	Company-level pre-incident planning should be conducted using NFPA 1620 for guidance.
<b>Efficiency</b>	 Strong performance	Upper Providence Township fire department efficiency is above-average.



## **2.0 Report Objectives**

This report is designed to evaluate the effectiveness of Upper Providence Township Fire Service compared to similar departments. Each section includes a set of key indicators along with a gap analysis and general recommendations. Recommendations are grounded in nationally accepted best practices and quality data. Contents are current as of October, 2014. Due to the current high rate of change in the fire service, benchmarks should be evaluated for department progress or decline on an annual basis.

The ultimate goal of fire service is to benefit the community. To that end, this report strives to assist you in your department’s pursuit of:

- Low injury and fatality rates
- Minimal property damage
- Low property insurance rates
- Strong community attractiveness as it relates to quality of life and economic well-being

**Note:** Unless otherwise indicated, all metrics aggregate data from residential and non-residential structure fires.

**Table 2: Region Definition**

Fire Jurisdiction:	Upper Providence Township Fire Service
Covered Municipalities:	Upper Providence Township
County:	Montgomery
State:	PA
# fire stations:	3
# fire hydrants:	600-700



### **3.0 Peer Group Definition**

While it is challenging to create perfect comparisons due to the uniqueness of Upper Providence, the use of ISO’s extensive data universe and intelligent segmentation provides highly directional guidance to identify areas of strength and opportunity. Peer groupings are defined to enable fair and actionable comparisons. The peer group includes 20 fire jurisdictions that have the most commonalities with Upper Providence Township Fire Service across the 7 criteria listed below. The large number of peers will ensure that any statistical outliers will not impact the analysis. State and national comparisons are also included for context.

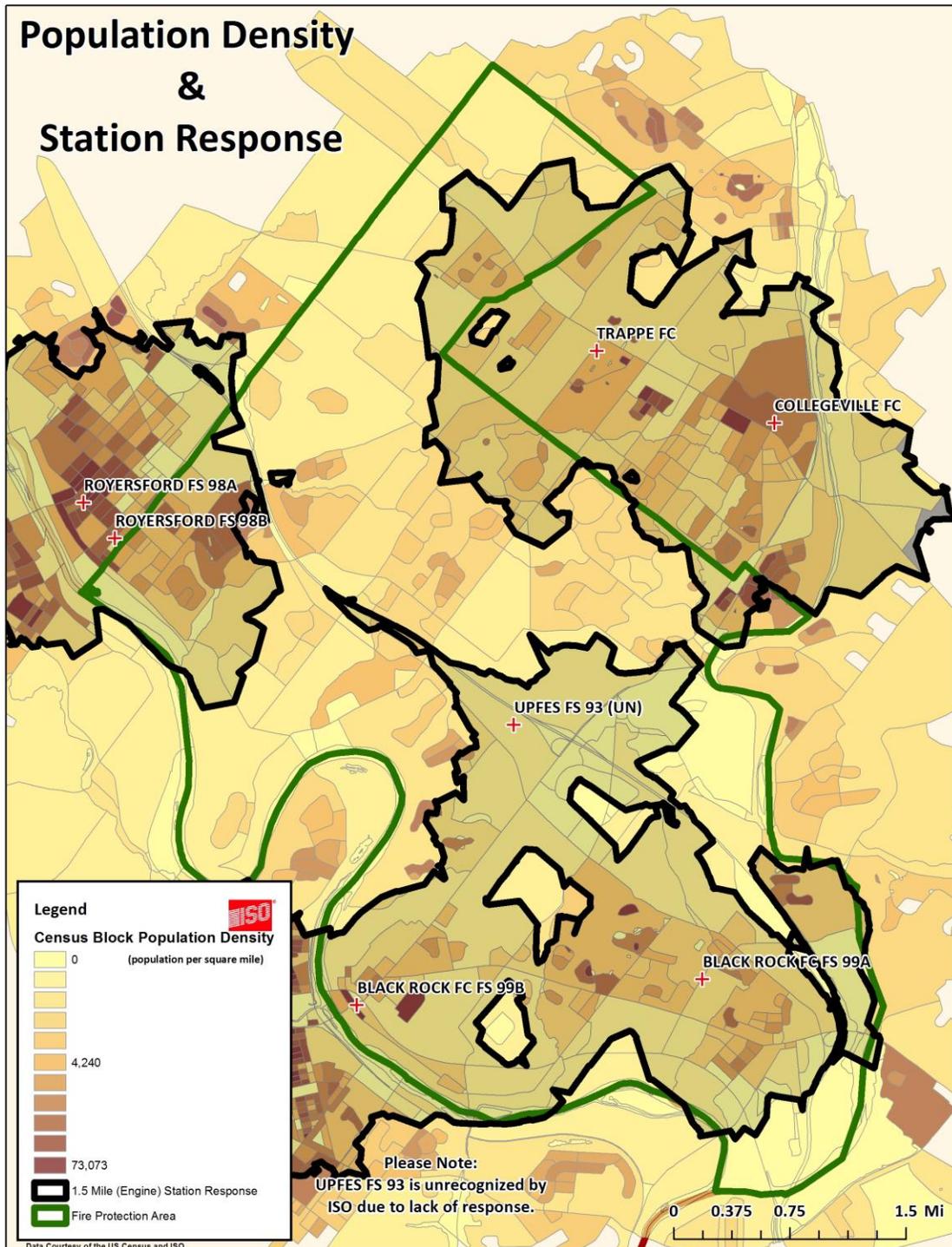
**Table 3: Criteria used for peer group selection**

<b>Criteria</b>	<b>Upper Providence Township</b>	<b>Peer group range</b>
Population	21,000	16,000-26,000
Coverage	18 square miles	7-27 square miles
Department structure	0% on-duty firefighters	0-2% on-duty firefighters
% fire-related structure calls	17%	5%-24%
Region	Northeast	PA, NY, NJ, MI
% residential*	97%	94-99%
Total representative fire flow	22,000 GPM	18,000-58,000 GPM

\*Calculated using Census households vs ISO Commercial Property “risks”<sup>1</sup>

## 4.0 Company Deployment

### 4.1 Population density & station response



**Figure 1: Population density and station response**

Data source: ISO Fire Department survey, US Census

## Description

This map combines population density with the 1.5 mile fire station response coverage. Population density is indicated by the darkness of the individual cells, with the dark areas being the most dense. Response coverage is outlined in black, and the jurisdiction boundary is outlined in green.

## Assessment

### — *Average performance*

Upper Providence is served on a continuous basis by four volunteer fire companies. Black Rock is the only fire company located within the township and operates two stations in the southern part of the township (see map – Stations 99A and 99B). Black Rock operates three engines and a tower-ladder from its two stations.

The remaining three volunteer fire companies respond on an automatic aid basis to portions of the township with respective stations located outside, but within one mile of, the township border. Royersford Fire Department primarily covers the central-western portion of the township, with two stations (98A and 98B) in close proximity to the township border. Station 98A houses an engine, ladder and rescue. Station 98B houses an engine.

Trappe Fire Company provides coverage to a large portion of the northern section of the township from a single station (77). Trappe operates an engine, ladder and tactical incident support unit. Collegeville Fire Company operates out of a single station (34), covering the central east part of the township. Apparatus includes an engine, squad-engine and a heavy rescue unit.

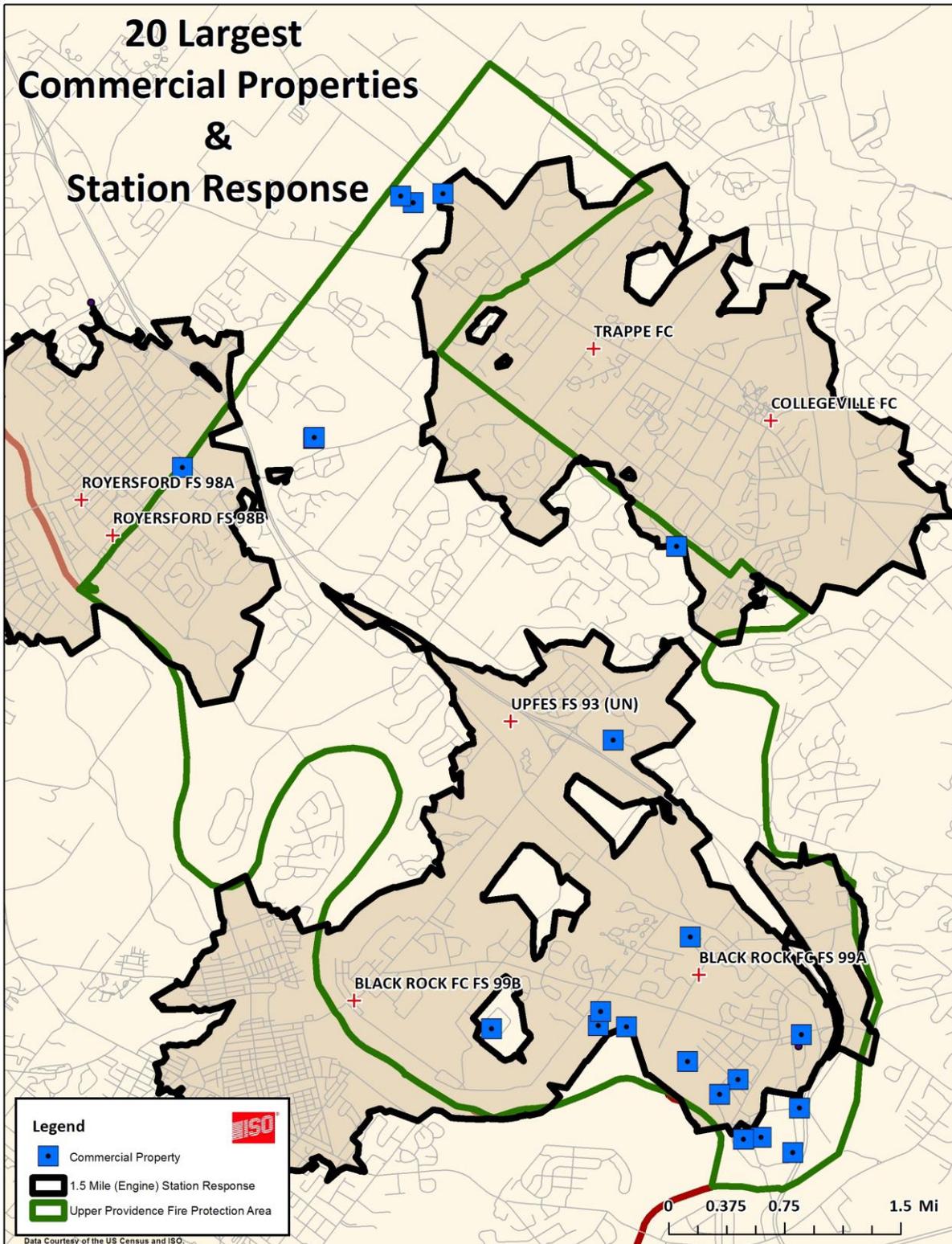
The township also operates an engine from its centrally located public works facility during normal weekdays between 7AM and 4PM. There are 10 trained public works employees with the engine typically staffed by four-to-six personnel for calls.

Overall station coverage for residential areas is good during weekdays with the area between S. Lewis Road and S. Trappe Road outside of the 1½ travel distance for an engine but within 2½ road miles. The remaining areas are generally within the 1½ mile distance for an engine. When the “Public Works” engine is not staffed, a larger area in the center of the township is outside the 1½ mile travel distance but these areas are occupied by primarily commercial facilities including shopping centers and research facilities.

## Recommendation

**2014-1:** Consideration should be given to staffing the “Public Works” engine on a full-time basis. The engine is currently only staffed during normal workdays, Monday through Friday, from 7AM to 4PM. This would provide enhanced coverage to the central part of the township on an around-the-clock basis. (Applies to Sections 4.1, 4.2, 4.3, 5.1, 8.1 and 8.2)

4.2 20 largest ISO-surveyed commercial properties & station response



**Figure 2: 20 largest commercial properties and station response**

Data source: ISO Fire Department survey, ISO Commercial Property Survey

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## Description

This map combines locations of the 20 largest commercial properties (as determined by square area for those maintained in ISO's Commercial Property database<sup>1</sup>) with the 1.5 mile fire station response coverage. Commercial properties are identified with a blue square. Response coverage is outlined in black, and the jurisdiction boundary is outlined in green.

**Note:** this map only shows commercial properties that are surveyed by ISO. While ISO evaluates approximately 50% of commercial properties nationwide, there may be large facilities that have not been evaluated by ISO for its insurance customers.

## Assessment

### — *Average performance*

Based on consideration of our commercial property database, the existing coverage of commercial properties is reasonable. The provision of Recommendation 2014-1 would significantly increase the coverage of commercial properties in the center of the township, including the Providence Town Center shopping area and the R&D facilities along S. Collegeville Road, on an around-the-clock basis.

## Recommendation

**2014-1:** Consideration should be given to staffing the "Public Works" engine on a full-time basis. The engine is currently only staffed during normal workdays, Monday through Friday, from 7AM to 4PM. This would provide enhanced coverage to the central part of the township on an around-the-clock basis. (Applies to Sections 4.1, 4.2, 4.3, 5.1, 8.1 and 8.2)

4.3 Population density & station proposal

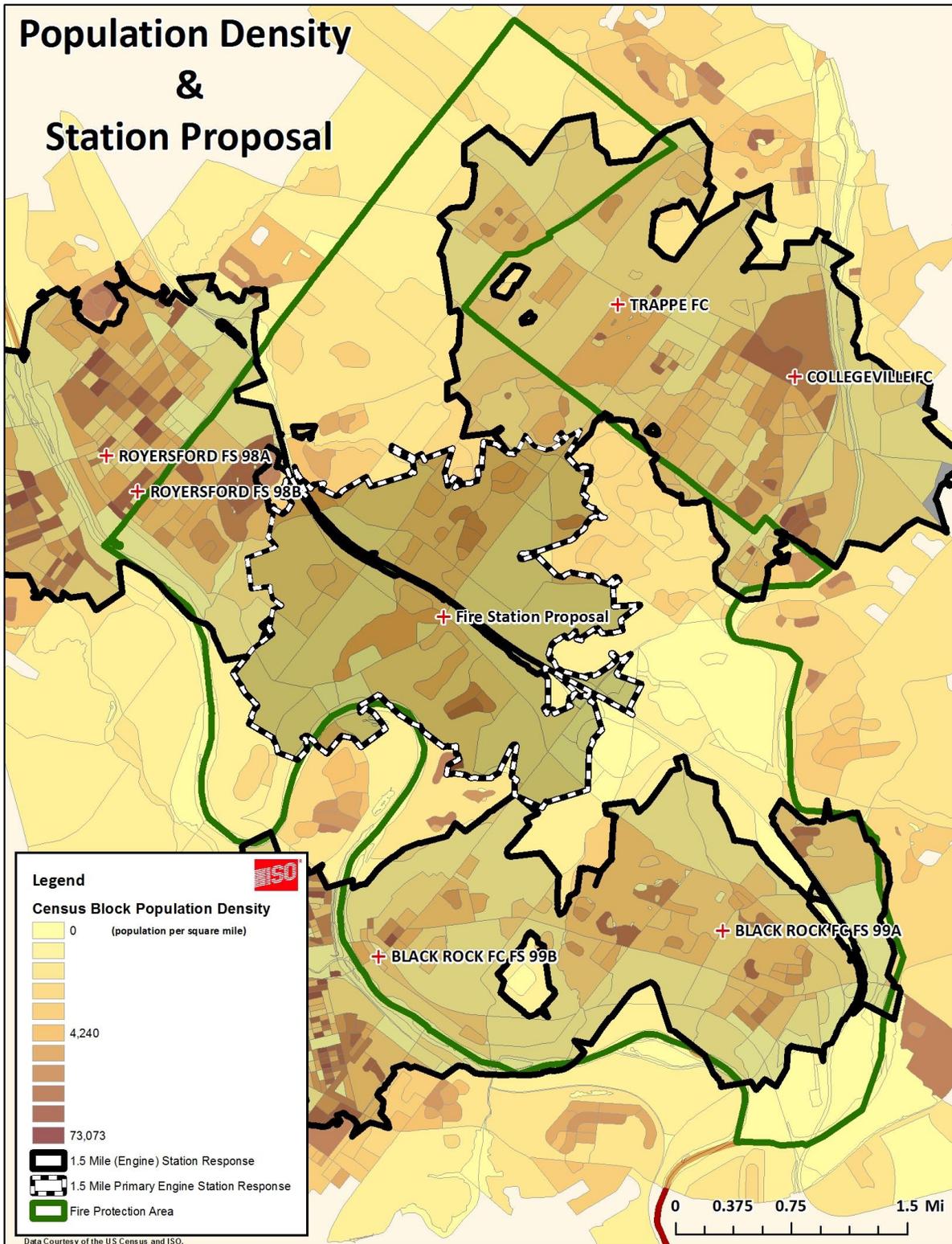


Figure 3: Population density and station proposal

Data source: ISO Fire Department survey

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**Description**

This map combines population density with the 1.5 mile fire station response coverage in the scenario where an additional, centrally located, fire station is added at the intersection of Black Rock Rd. and Yaeger Rd. Population density is indicated by the darkness of the individual cells, with the dark areas being the most dense. Response coverage is outlined in black, and the jurisdiction boundary is outlined in green.

**Note:** This location is not a recommendation from ISO, but an address received during the interview process.

**Assessment**

 ***Strong performance***

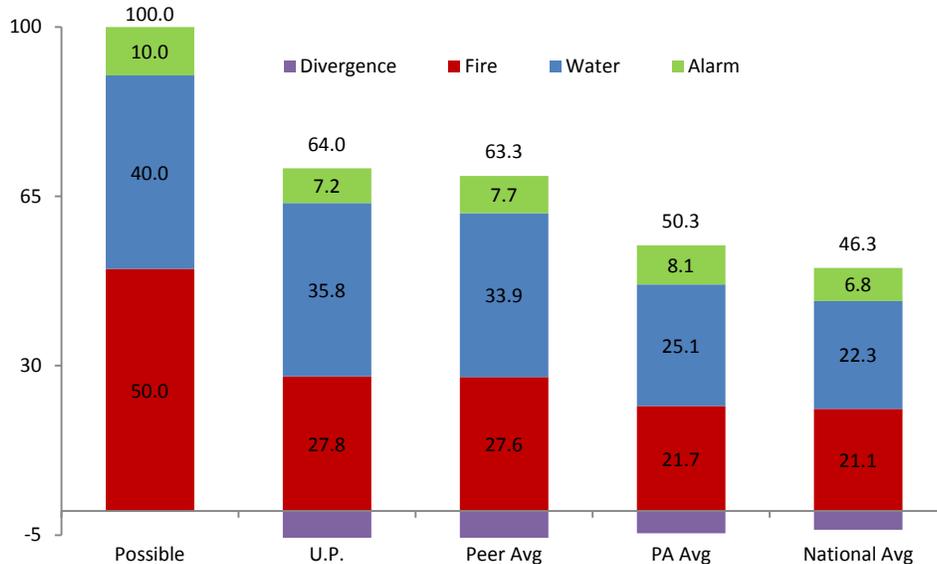
The addition of the new station in conjunction with maintaining the two Black Rock stations, would enhance coverage to the central part of the township. The net result would be average-to-above average coverage for the residential and commercial exposures in the township.

**Recommendation**

None

## 5.0 Public Protection Classification

### 5.1 PPC™ total points scored<sup>2</sup>



**Figure 4: Distribution of PPC™ points**

Data source: ISO Fire Department survey

#### Description

PPC™ is an aggregate measure of a community’s fire suppression facilities to suppress structure fires. It does not evaluate other, equally important, services provided by the Fire Department (i.e. rescue, ambulance, EMT services, etc.) Total points include all elements captured to assign a Public Protection Classification: fire department (50 points), water supply (40 points), and emergency communications (10 points). A “divergence” adjustment is also applied to account for the limiting effect a lower fire / water score has on the other. Communities that earn more than 90 total points achieve the best class rating of a 1.

**Note:** The sum of PPC™ components displayed in the above chart may not add up to the total points scored due to the Divergence adjustment.

#### Assessment

##### ✔ Strong performance

Overall Upper Providence Township performs well when compared against its peers (+1%), the state average (+27%) and the national average (+38%). There is an opportunity for improvement within the Fire Department section where 27.8 out of a possible 50 points are achieved. Areas of focus for the township should include staffing (3.02 out of a possible 15 points) and training (2.45 out of a possible 9 points).

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**Recommendation**

**2014-1:** Consideration should be given to staffing the “Public Works” engine on a full-time basis. The engine is currently only staffed during normal workdays, Monday through Friday, from 7AM to 4PM. This would provide enhanced coverage to the central part of the township on an around-the-clock basis. (Applies to Sections 4.1, 4.2, 4.3, 5.1, 8.1 and 8.2)

**2014-2:** The following actions to improve overall staffing for fire response should be considered: (Applies to Sections 5.1, 8.1 and 8.2)

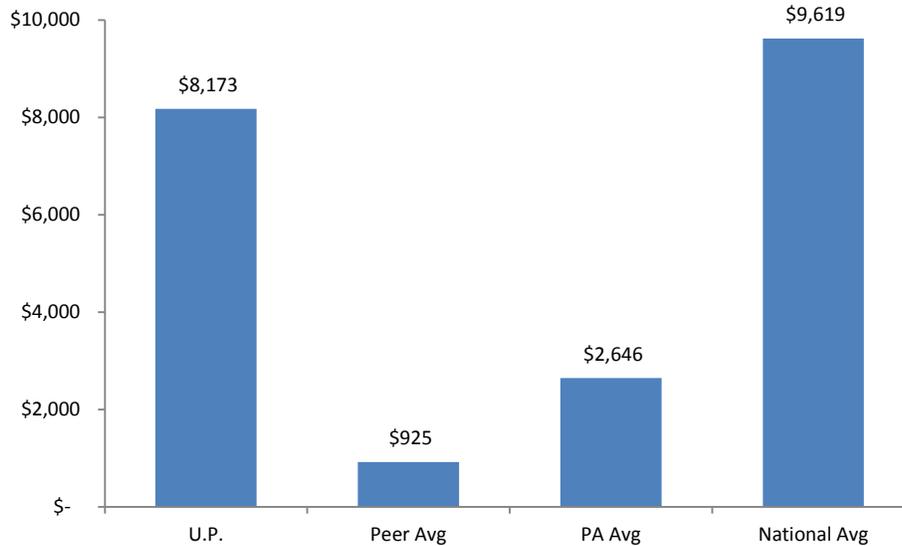
- a) Develop and implement retention and recruitment programs to increase the level of staffing within the township fire companies. This includes the Black Rock fire company as well as the three automatic aid companies. Efforts should also be considered to recruit volunteers from surrounding areas that are employed within the township.
- b) Consideration should be given to the use of “duty crews” that would staff the fire station during weekday evenings.
- c) Consideration should be given to the application for public (state and federal government) and private grants to fund staffing initiatives.

**2014-3:** Ensure an adequate review and evaluation of training by providing the following: (Applies to Sections 5.1 and 9.1)

- a) Documentation of all training sessions that includes subject details, duration, and activities. Use NFPA standards for guidance.
- b) Documentation of attendance for all personnel.

## 6.0 Performance

### 6.1 Fire severity



**Figure 5: Property dollar loss per incident**

Data source: NFIRS<sup>3</sup>, Upper Providence Twp

#### Description

Fire severity is defined as the average dollar loss per incident and is an indicator of fire prevention and suppression effectiveness.

**Note:** Due to data limitations, Upper Providence data includes average from 2011-2013; Peer, PA, and National avg data includes average from 2008-2011; between 5 and 9 peers were used each year dependent on data completeness.

#### Assessment

##### Room for improvement

The fire severity in Upper Providence is approximately 15% less than the national average per incident. However, the fire severity is very high compared to its peers and the state average.

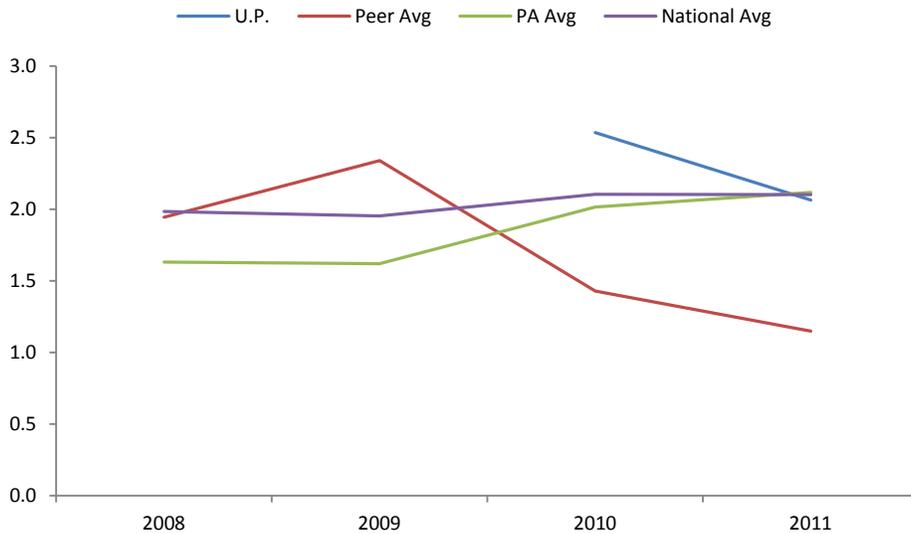
#### Recommendation

**2014-4:** Consider the implementation of a community fire risk assessment that considers historical incidents, commercial buildings and their associated occupancy classifications, buildings with high occupant loads, and factors contributing to fire ignition. Fire prevention and public awareness programs should be reviewed to ensure they address the community’s risks. Future expansion should also be considered. (Applies to Sections 6.1 and 7.1)

**2014-5:** Conduct pre-incident planning for all commercial buildings on an annual basis using NFPA 1620 for guidance. (Applies to Sections 6.1, 9.2, 9.3, and 11.1)

## 7.0 Prevention

### 7.1 Fire frequency



**Figure 6: Number of fire incidents per 1,000 people (2008-2011)**

Data sources: NFIRS<sup>3</sup>, US Census

#### Description

Fire frequency is calculated as the number of fire incidents per 1,000 people. It is a key indicator of fire prevention effectiveness.

Notes: Peer outliers were removed, resulting in 5-8 peers included for each year. PA and National estimates were normalized to account for an estimated 75% NFIRS coverage.

#### Assessment

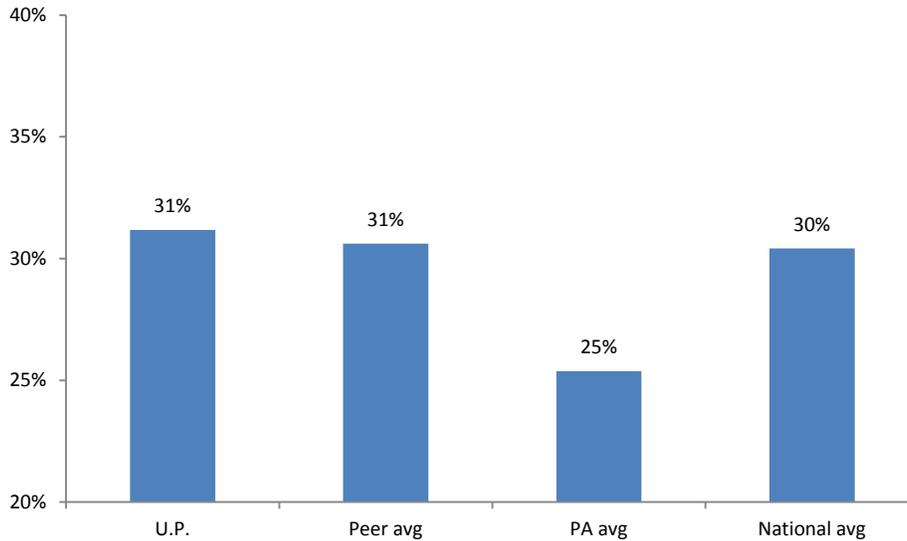
##### Room for improvement

Upper Providence shows a decreasing trend in fire frequency from 2010 to 2011, but it is still higher than peer, state and national averages.

#### Recommendation

**2014-4:** Consider the implementation of a community fire risk assessment that considers historical incidents, commercial buildings and their associated occupancy classifications, buildings with high occupant loads, and factors contributing to fire ignition. Fire prevention and public awareness programs should be reviewed to ensure they address the community's risks. Future expansion should also be considered. (Applies to Sections 6.1 and 7.1)

## 7.2 Commercial property sprinkler adoption



**Figure 7: Commercial property sprinkler adoption**

Data source: ISO Commercial Property survey<sup>1</sup>

### Description

This reflects the percentage of commercial properties with a partial or full sprinkler system. Numbers are estimated based on a representative sample of surveyed properties collected in ISO’s Commercial Property database. Sprinkler systems are designed to mitigate property damage and allow potential victims to exit a hazardous situation quickly.

### Assessment

#### — Average performance

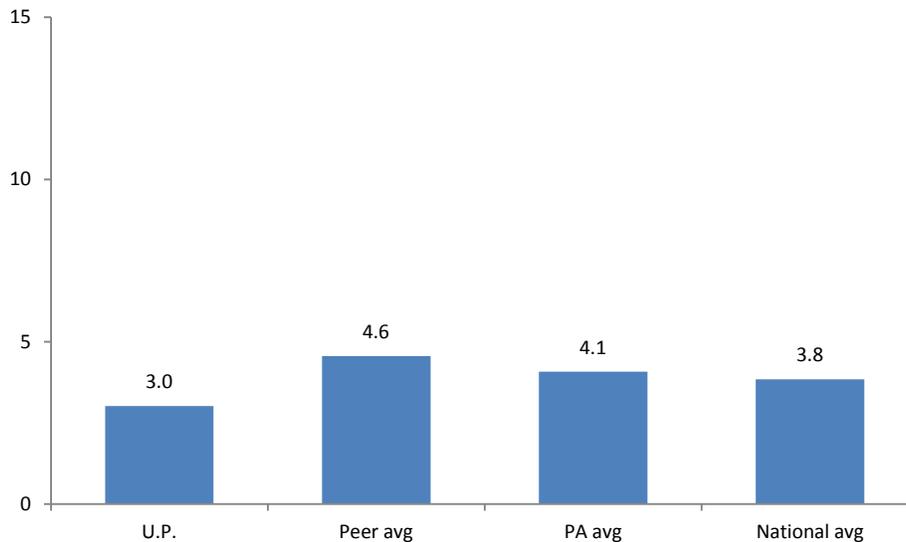
The percentage of commercial properties with sprinkler protection, based on ISO’s commercial property database, matches the peer average, is 24% better than the state average and 3% better than the national average.

### Recommendation

**2014-6:** While Upper Providence does seem to have a reasonable level of sprinkler adoption, efforts should be made to encourage the use of sprinklers whenever possible.

## 8.0 Personnel

### 8.1 PPC™ points for personnel



**Figure 8: PPC™ points for personnel**

Data source: ISO Fire Department survey

#### Description

This metric measures the adequacy of staffing for existing engine, ladder and service companies. The score is based on members staffing apparatus at stations, as well as off-duty and on-call members who respond when alerted. Maximum amount of points available = 15.

#### Assessment

##### Room for improvement

The 3.0 points out of 15 achieved by Upper Providence is 35% below the average of its peers, 27% below the state average, and 21% below the national average.

#### Recommendation

**2014-1:** Consideration should be given to staffing the “Public Works” engine on a full-time basis. The engine is currently only staffed during normal workdays, Monday through Friday, from 7AM to 4PM. This would provide enhanced coverage to the central part of the township on an around-the-clock basis. (Applies to Sections 4.1, 4.2, 4.3, 5.1, 8.1 and 8.2)

**2014-2:** The following actions to improve overall staffing for fire response should be considered: (Applies to Sections 5.1, 8.1 and 8.2)

- a) Develop and implement retention and recruitment programs to increase the level of staffing within the township fire companies. This includes the Black Rock fire company as well as the three

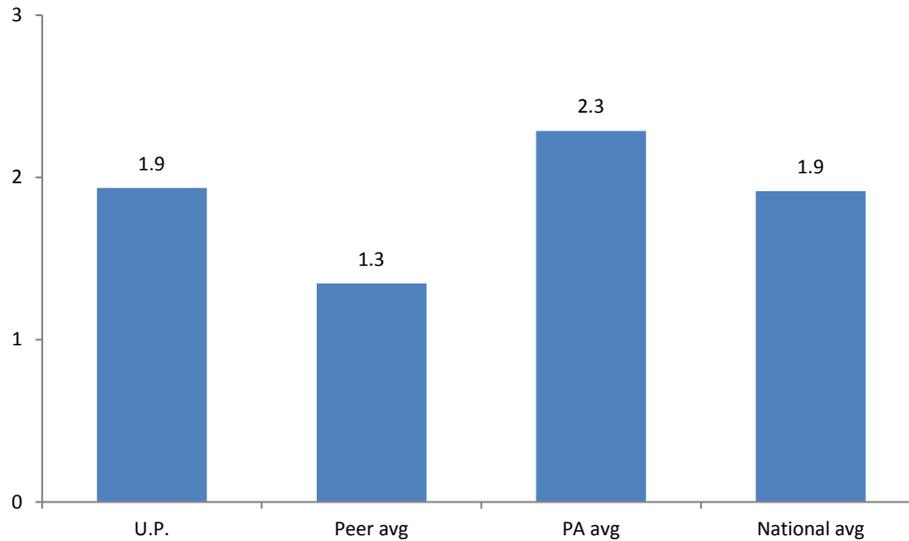


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automatic aid companies. Efforts should also be considered to recruit volunteers from surrounding areas that are employed within the township.

- b) Consideration should be given to the use of “duty crews” that would staff the fire station during weekday evenings.
- c) Consideration should be given to the application for public (state and federal government) and private grants to fund staffing initiatives.

## 8.2 Firefighters per population



**Figure 9: Number of firefighters per 1,000 people**

Data sources: ISO Fire Department survey, Census

### Description

Number of firefighters per 1,000 people. Firefighter enrollment is an indication of the community investment in fire protection. For this metric, firefighter enrollment is the sum of the average number of on-duty fire suppression personnel per day and 33% of the number of on-call, volunteer, and off-shift members responding to first alarms per day. This sum is divided by the jurisdiction population and then multiplied by 1,000.

### Assessment

#### Room for improvement

The number of firefighters is 46% better than the township’s peers, 17% less than the state average and the same as the national average.

### Recommendation

**2014-1:** Consideration should be given to staffing the “Public Works” engine on a full-time basis. The engine is currently only staffed during normal workdays, Monday through Friday, from 7AM to 4PM. This would provide enhanced coverage to the central part of the township on an around-the-clock basis. (Applies to Sections 4.1, 4.2, 4.3, 5.1, 8.1 and 8.2)

**2014-2:** The following actions to improve overall staffing for fire response should be considered: (Applies to Sections 5.1, 8.1 and 8.2)

- a) Develop and implement retention and recruitment programs to increase the level of staffing within the township fire companies. This includes the Black Rock fire company as well as the three



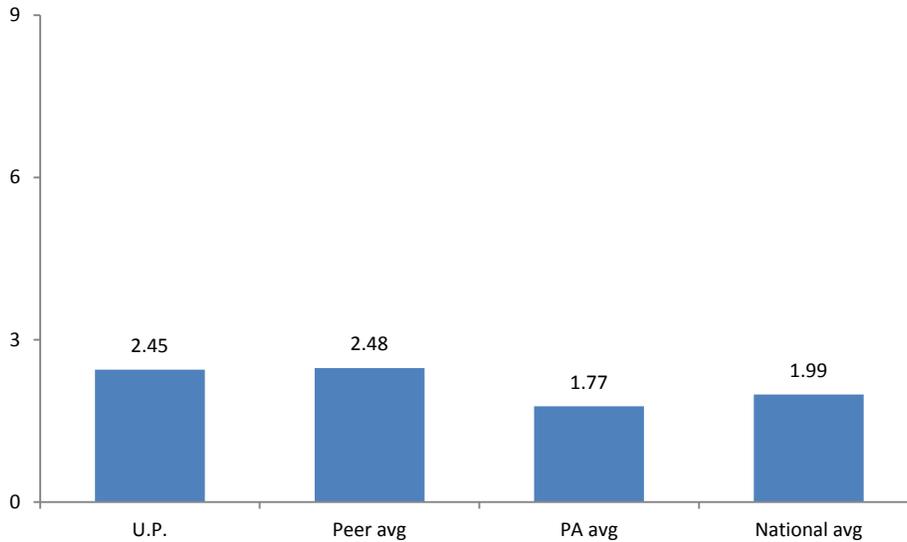
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automatic aid companies. Efforts should also be considered to recruit volunteers from surrounding areas that are employed within the township.

- b) Consideration should be given to the use of “duty crews” that would staff the fire station during weekday evenings.
- c) Consideration should be given to the application for public (state and federal government) and private grants to fund staffing initiatives.

## 9.0 Training

### 9.1 PPC™ points for training



**Figure 10: PPC™ points for training**

Data source: ISO Fire Department survey

#### Description

Measurement of the adequacy of fire department training related to structure fires. Items in this evaluation include: department training using a fire training facility; company training at fire stations; fire officer training; driver and operator training; hazardous materials training, pre-incident planning, and training records. Maximum amount of points available = 9.

#### Assessment

##### — Average performance

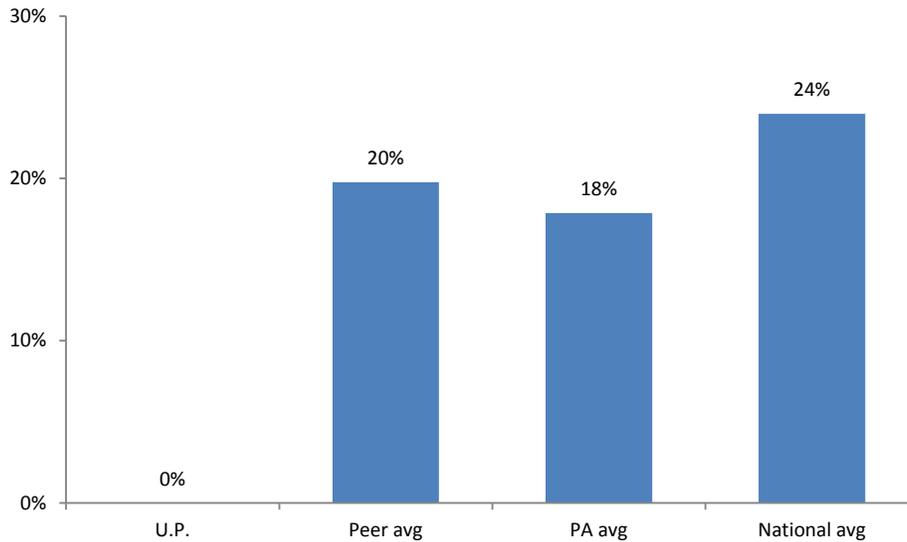
While the points for training is only slightly below that of its peers (-1%), and better than the state (+38%) and national averages (+23%), there is an opportunity to achieve a higher level of training by providing ISO full training and attendance details.

#### Recommendation

**2014-3:** Ensure an adequate review and evaluation of training by providing the following: (Applies to Sections 5.1 and 9.1)

- a) Documentation of all training sessions that includes subject details, duration, and activities. Use NFPA standards for guidance.
- b) Documentation of attendance for all personnel.

## 9.2 Pre-plan coverage



**Figure 11: Pre-incident planning coverage**

Data source: ISO Fire Department survey

### Description

Pre-plan coverage is calculated as the percentage of buildings with a pre-plan that has been updated in the last five years. Pre-incident planning coverage is a reflection of the extent of outreach for fire department preparedness.

### Assessment

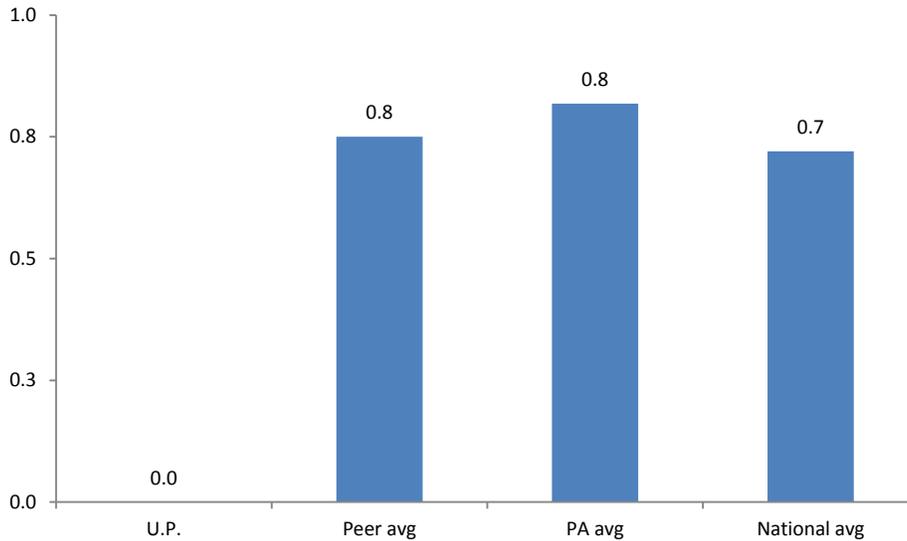
#### **Room for improvement**

Pre-incident plans are not conducted for commercial buildings at the company level. This important process should be implemented to facilitate fire company response to structure fires in a commercial building.

### Recommendation

**2014-5:** Conduct pre-incident planning for all commercial buildings on an annual basis using NFPA 1620 for guidance. (Applies to Sections 6.1, 9.2, 9.3, and 11.1)

### 9.3 Pre-incident planning frequency



**Figure 12: Average age of pre-plans**

Data source: ISO Fire Department survey

#### Description

This is the average age (in years) of existing pre-plans for commercial buildings. This is a reflection of the currency associated with fire department preparedness.

#### Assessment

##### **Room for improvement**

Pre-incident plans are not conducted for commercial buildings at the company level. This important process should be implemented to facilitate fire company response to structure fires in a commercial building.

#### Recommendation

**2014-5:** Conduct pre-incident planning for all commercial buildings on an annual basis using NFPA 1620 for guidance. (Applies to Sections 6.1, 9.2, 9.3, and 11.1)

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## **10.0 Building Code**

### ***Upper Providence Township declined to participate in the Building Code Effectiveness Grading Schedule (BCEGS®) program.***

Building code enforcement can have a major influence on the economic well-being of a municipality and the safety of its citizens. Municipalities that adopt up-to-date, unamended codes and rigorously enforce them using a sufficient number of trained and certified code enforcement professionals can result in safer buildings and could experience lesser damage from natural hazards, fire, and other perils, ultimately reducing insurance costs. The prospect of lessening losses and ultimately lowering insurance premiums provides an incentive for communities to enforce their building codes rigorously.

Not all municipalities adopt and enforce building codes or have equally stringent building codes, nor do all municipalities enforce their codes with the same vigor. The effectiveness of local building code enforcement can help predict and mitigate losses. The BCEGS® program assesses the municipality's enforcement efforts and assigns each municipality a BCEGS® classification of 1 to 10. Class 1 communities represent exemplary commitment to building code enforcement. ISO gives insurers the BCEGS® classifications, advisory credits, and related underwriting information.

Participation in the BCEGS® program has many other benefits:

1. Offers community officials detailed information about their local code enforcement program, illustrating the level of resources made available for that purpose
2. Helps community officials identify areas of their code enforcement program that may not be in line with regional, state, or national trends
3. Provides a chronological history of the trends in code enforcement efforts by the community
4. Enables communities with more favorable BCEGS® classifications to experience lower fire frequencies than communities with less favorable BCEGS® classifications
5. Gives policyholders' homes and businesses enhanced resilience against natural disasters or everyday losses
6. Positions policyholders in communities with effective building code programs to receive more insurance choices, premium discounts or reduced deductibles



## 11.0 Commercial Property

### 11.1 25 high risk ISO-surveyed commercial buildings

**Table 4: List of most at-risk commercial buildings**

Building Description	Address	Postal City	Building use	Construction class	Sprinkler system status	# Stories	Bldg area sq ft	Last Onsite Survey Date
422 BUSINESS CENTER	840 NORTH DR	OAKS	Multiple Occupancy Mercantile, Over 15,000 Square Feet, Building Coverage Only, Not Fire Class Rated	Non-Combustible	NONSPRINKLERED	2	1,240,970	6/1/2012
SPRING FORD SCH DIST	833 S LEWIS RD	ROYERSFORD	Schools, Academic	Frame	NONSPRINKLERED	1	900	3/1/2011
SPRING FORD SCH DIST	833 S LEWIS RD	ROYERSFORD	Schools, Academic	Frame	NONSPRINKLERED	1	336	3/1/2011
SPRING FORD SCH DIST	833 S LEWIS RD	ROYERSFORD	Schools, Academic	Frame	NONSPRINKLERED	1	1,050	3/1/2011
RIVERCREST GOLF CLUBHOUSE	100 CLUBHOUSE DR	PHOENIXVILLE	Golf Clubs, Tennis Clubs and Similar Sports Facilities with Cooking	Frame	NONSPRINKLERED	2	48,007	3/1/2006
SPRING FORD SCH DIST	833 S LEWIS RD	ROYERSFORD	Schools, Academic	Frame	NONSPRINKLERED	1	1,100	3/1/2011
SPRING FORD SCH DIST	833 S LEWIS RD	ROYERSFORD	Schools, Academic	Frame	NONSPRINKLERED	1	2,520	3/1/2011
CHEMCLEAN-TOWAMENCIN METAL	94 BROWER AVE	OAKS	Waste and Reclaimed Material, including Yards	Frame	NONSPRINKLERED	1	8,000	1/1/1999
POLYFLOW INC	2280-2480 WEST DR	OAKS	Plastic Products	Joisted Masonry	NONSPRINKLERED	1	111,650	4/1/2009
W E FOSBENNER	30 BROWER AVE	OAKS	Metalworking, NOC	Masonry Non-Combustible	NONSPRINKLERED	1	9,000	9/1/1985
VALLEY FORGE CONVEYORS	70 BRIDLE LN	COLLEGEVILLE	Metalworking, NOC	Non-Combustible	NONSPRINKLERED	1	33,600	10/1/2004
1840 RIDGE PIKE FECERA	1840 E RIDGE PIKE	LIMERICK	Sole Occupancy Mercantile, Over 15,000 Square Feet, Building Coverage, Other than Food Risks	Frame	NONSPRINKLERED	1	62,906	9/1/2007
422 SELF STORAGE 406-510	190 NORTH DR	OAKS	General Storage Warehouses - Bailee	Non-Combustible	NONSPRINKLERED	1	1,000	9/1/2007
FREDRIC CRIST/METAL SMITH	802 COLLEGEVILLE RD	MONT CLARE	Metalworking, NOC	Frame	NONSPRINKLERED	1	324	6/1/1986
PROVIDENCE TOWN CENTER 3 TENANT	99 MARKET ST	COLLEGEVILLE	Multiple Occupancy Mercantile, Less than 15,000 Square Feet, Building Coverage Only, Not Fire Class Rated	Joisted Masonry	NONSPRINKLERED	1	12,800	6/1/2012
SUBURBAN MGT CO INC	106-108 MONTGOMERY AVE	UPPER PROVIDENCE TS	Printing	Non-Combustible	NONSPRINKLERED	1	22,000	8/1/2002
JOSEPH CORALLO	1058 EGYPT RD	OAKS	Restaurants with Commercial Cooking	Frame	NONSPRINKLERED	1	1,325	10/1/1985
VALLEY FORGE TEMPLE STORAGE #2	616 S TRAPPE RD	COLLEGEVILLE	Miscellaneous Products Storage - (other than Retail or Wholesale or Cold Storage)	Frame	NONSPRINKLERED	1	168	6/1/2006
VALLEY FORGE DIST CNTR, BLDG#4	GREEN TREE RD	OAKS	Vacant Buildings	Non-Combustible	NONSPRINKLERED	2	15,870	12/1/2001
J J HAINES AND CO INC	2630 WEST DR	OAKS	Sole Occupancy Mercantile, Over 15,000 Square Feet, Building Coverage, Other than Food Risks	Non-Combustible	NONSPRINKLERED	1	28,000	10/1/1997
CHILDREN OF AMERICA	1600 RIDGE PIKE	TRAPPE	Schools, Academic	Frame	NONSPRINKLERED	1	10,820	12/1/2008
PD HOME & GARDEN INC	940 N CIRCLE DR	OAKS	Miscellaneous Products Storage - (other than Retail or Wholesale or Cold Storage)	Frame	NONSPRINKLERED	1	46,740	3/1/2010
WOOD CRAFT & DESIGN	1609 W MAIN ST	COLLEGEVILLE	Furniture and Other Wood Products, NOC	Frame	NONSPRINKLERED	2	1,264	7/1/2000
ACCOMMODATING MICROWAVE	119 FARRINGTON CT	COLLEGEVILLE	Residential Condominiums with Mercantile Occupancies - Up to 10 Units	Frame	NONSPRINKLERED	2	2,400	9/1/2007
JOS CARTER AUTO BODY REPAIR BLDG 3	PAWLINGS RD	OAKS	Aircraft Hangars with Repairing, Motor Vehicle Repairing Including Auto Body Shops, with or without Sales	Joisted Masonry	NONSPRINKLERED	1	684	8/1/1981

Data sources: ISO Commercial property surveys<sup>1</sup>

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**Description**

The above commercial buildings represent the highest risk to the community and can be used as a guide to prioritize fire inspections and pre-plans. Risk is determined based on the likely loss of life and property and is ranked based on an aggregate score comprised of:

- Building use
- Construction class
- Sprinkler system status
- # Stories
- Building area
- Needed Fire Flow (NFF)

**Note:** this list only shows commercial properties that are surveyed by ISO. While ISO evaluates approximately 50% of commercial properties nationwide, there may be large facilities that have not been evaluated by ISO for its insurance customers.

**Assessment**

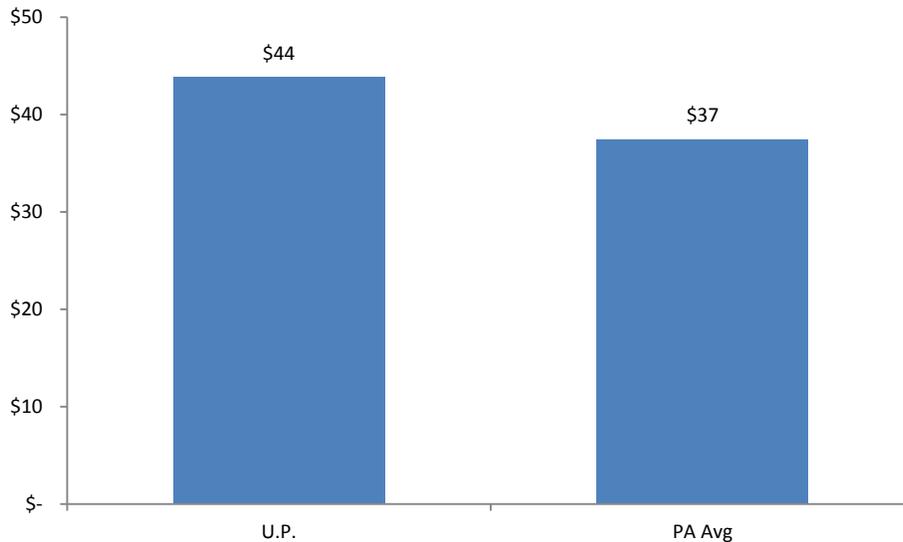
There is a moderate amount of commercial buildings that are essentially non-sprinklered. Response to structure fires at these risks would be enhanced by pre-incident planning.

**Recommendation**

**2014-5:** Conduct pre-incident planning for all commercial buildings on an annual basis using NFPA 1620 for guidance. (Applies to Sections 6.1, 9.2, 9.3, and 11.1)

## 12.0 Efficiency

### 12.1 Relative fire investment<sup>4</sup>



**Figure 13: Fire investment per resident (2012)**

Data sources: PA DCED Municipal Statistics Reports, Township of Upper Providence 2012 budget summary, US Census

#### Description

Relative fire investment is calculated as total fire expenditures divided by the jurisdiction population. Fire investment per resident is a measure of fire protection investment as it relates to fire protection need. Budget statistics come from PA DCED and represents submissions from 2,455 municipalities; the peer average for this metric was not included because there were only 12 peers located in Pennsylvania and too many outliers to create a meaningful statistic. Caution should be given to the usefulness of this analysis since a fair comparison assumes comparable accounting practices across municipalities – and a limited impact caused by a potential variation in the % of fire-related calls.

#### Assessment

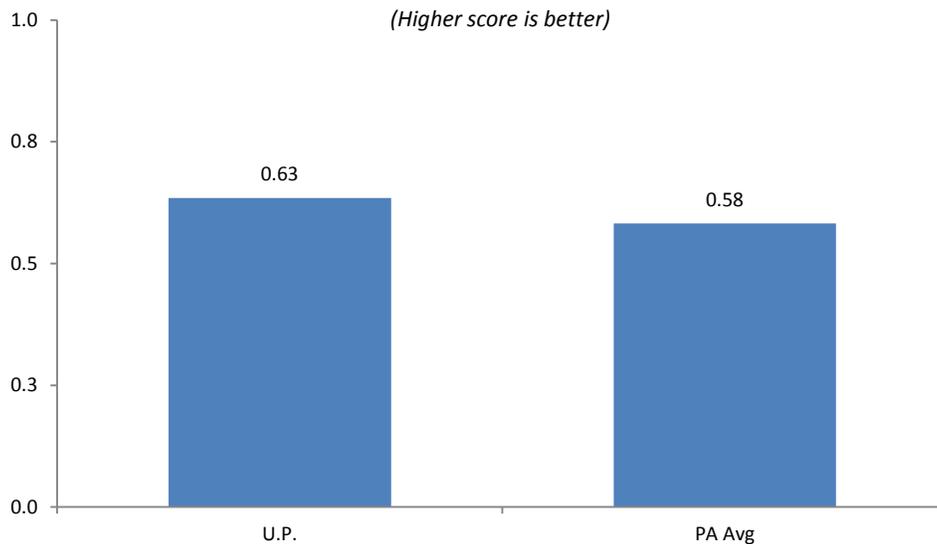
— Average performance

Upper Providence relative fire investment is slightly higher (19%) than the state average.

#### Recommendation

None

## 12.2 Fire department efficiency<sup>4</sup>



**Figure 14: Fire department efficiency (2012)**

Data sources: PA DCED Municipal Statistics Reports, Township of Upper Providence 2012 budget summary, US Census, ISO Fire Department survey

### Description

Fire department efficiency is calculated as fire PPC™ Fire Points divided by Relative fire investment (fire department budget expense per resident). This is a measure of how well department spending is applied to obtain PPC™ “Fire” points. A higher number indicates better efficiency. Budget statistics come from PA DCED and represents submissions from 2,455 municipalities; the peer average for this metric was not included because there were only 12 peers located in Pennsylvania and too many outliers to create a meaningful statistic. Caution should be given to the usefulness of this analysis since a fair comparison assumes comparable accounting practices across municipalities – and a limited impact caused by a potential variation in the % of fire-related calls

### Assessment

✔ Strong performance

Upper Providence fire department efficiency is more favorable (9% better than) the state average.

### Recommendation

None



**Table 5: Efficiency calculations for Sections 12.1 and 12.2**

	<b>2012 Fire Budget</b>	<b>Population</b>	<b>Relative fire investment</b>	<b>PPC™ Fire points</b>	<b>Fire department efficiency</b>
<b>U.P.</b>	\$ 920,326	21,000	\$ 43.83	27.8	0.63
<b>PA Avg</b>	\$ 162,394	4,335	\$ 37.46	21.8	0.58

Data sources: PA DCED Municipal Statistics Reports, Township of Upper Providence 2012 budget summary, US Census, ISO Fire Department Survey



## 13.0 Data sources and Notes

**Table 6: List of data sources**

	ISO Fire dept survey	ISO Building dept survey	ISO Commercial property survey <sup>1</sup>	NFIRS (National Fire Incident Reporting System)	PA DCED <sup>4</sup>	US Census	Upper Providence Twp
Company Deployment	X		X			X	X
Public Protection Classification	X						
Performance				X			X
Prevention			X	X		X	
Personnel	X					X	
Training	X						
Building code		X					
Commercial Property			X				
Efficiency	X			X	X	X	X

### Annotated Notes:

1. ISO has comprehensive risk information on approximately 3.5 million commercial properties. While we believe this coverage is strong, it is certainly not complete. There may be commercial properties within your jurisdiction that are not included in this report’s analyses. For the purposes of this report, each ISO “risk” (designated as such for insurance purposes) is assumed to be the equivalent of a building.
2. The PPC grading schedule was updated in 2013. While this revision incorporates newer technologies and fire prevention methodologies, it was designed so that a jurisdiction’s classification would typically not change with an updated survey. All selected peer fire departments have surveys that were updated within the last 10 years. Peers that have not had an update within the last 5 years were excluded if it is believed there have been changes since the last grading.
3. At the time of data capture, NFIRS data was only available through 2011, while incident information from Upper Providence was available through 2013. Known outliers were removed from all NFIRS analyses and normalization techniques were used to maintain fair comparisons.
4. Data for the peer and state efficiency analyses comes from the PA DCED Municipal statistics reports. Using such data assumes comparable accounting standards across the state. Data quality is especially concerning because the DCED reports that Upper Providence’s fire department spend is over twice the 2012 budget referenced on the Upper Providence website. Budget data from the website under the line item, “Fire Protection & Emergency Management Services” was used for the purposes of this study.