

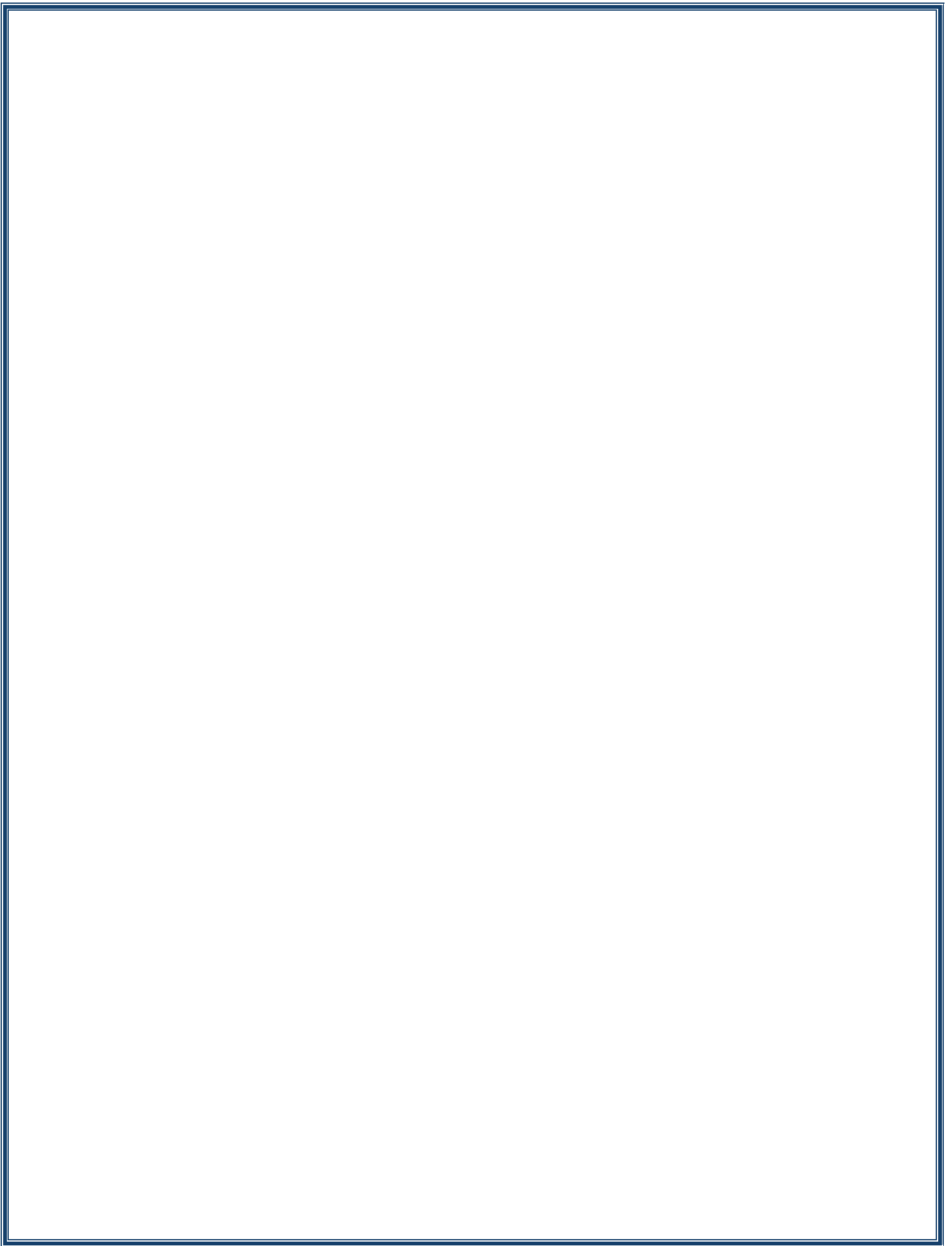


*Office of the
Delaware State Fire Marshal*

69th Annual Report

Fiscal Year 2022







STATE OF DELAWARE
OFFICE OF THE STATE FIRE MARSHAL

GROVER P. INGLE
STATE FIRE MARSHAL

DOVER OFFICE
HEADQUARTERS

September 1, 2022

The Honorable John C. Carney, Governor
State of Delaware
Office of the Governor
Tatnall Building
Dover, DE 19901

Dear Governor Carney,

I am pleased to forward to you the Sixty-Ninth Annual Report for the Office of the State Fire Marshal.

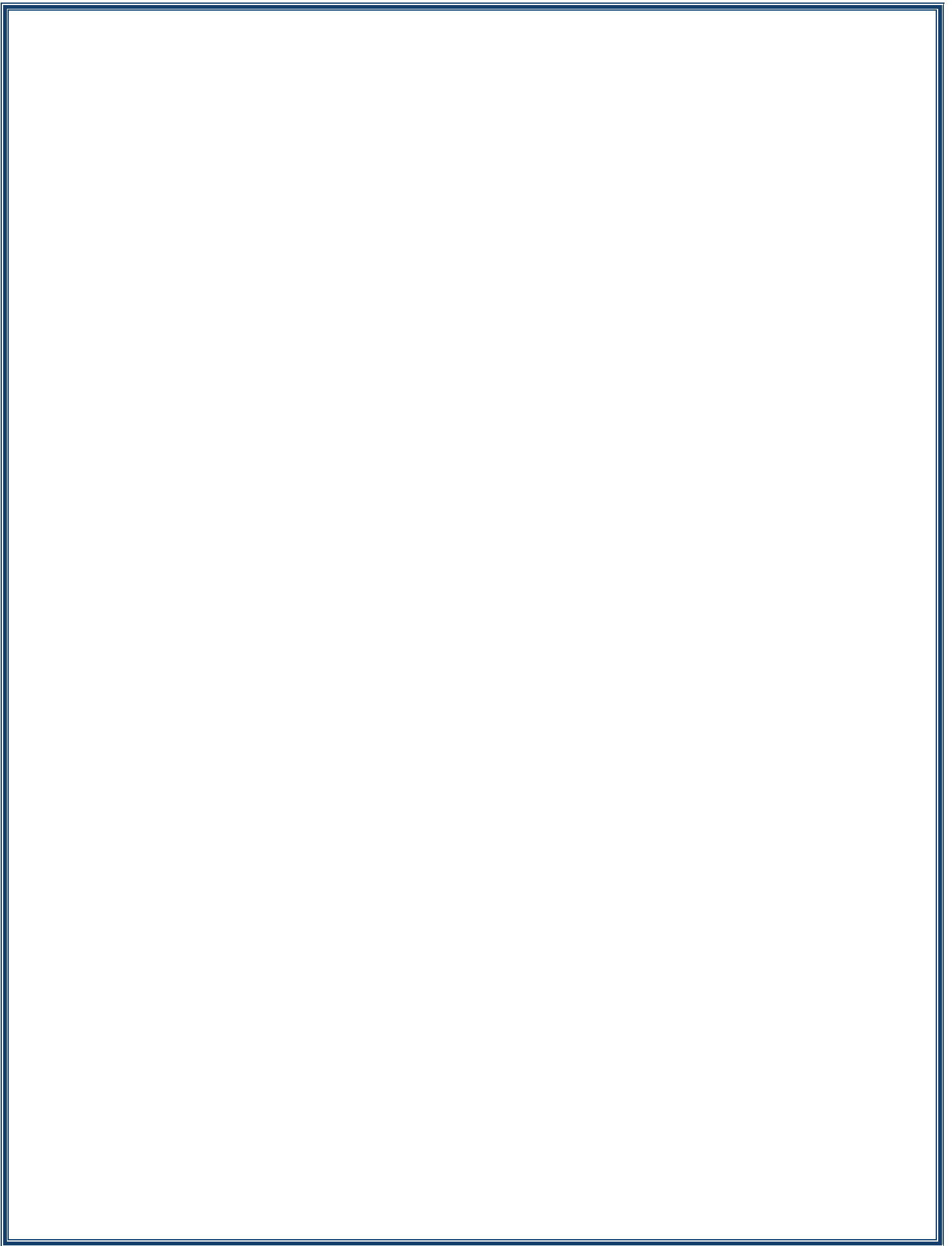
The Sixty-Ninth Annual Report reflects the accomplishments of the agency by our dedicated staff in providing a fire safe environment for the residents and visitors of Delaware during FY 2022. Through the past year by conducting thorough and efficient fire investigations, performing occupancy inspections, various code enforcement activities, plan reviews, fire protection system reviews and inspections along with community outreach programs our agency was able to provide the citizens of the State of Delaware and all who visit a fire safe environment be it in the home, workplace or wherever they pursue their varied lifestyles or interest.

The staff of the Office of the State Fire Marshal worked with other state agencies, our partners in law enforcement, our first responders, the Delaware Volunteer Firefighter's Association, Delaware State Fire School, and Delaware State Fire Prevention Commission to deliver timely and quality service to the residents and visitors of Delaware.

We appreciate the support you provide to our agency as Governor as well as the support of the General Assembly in providing the funding and the resources needed to accomplish our mission.

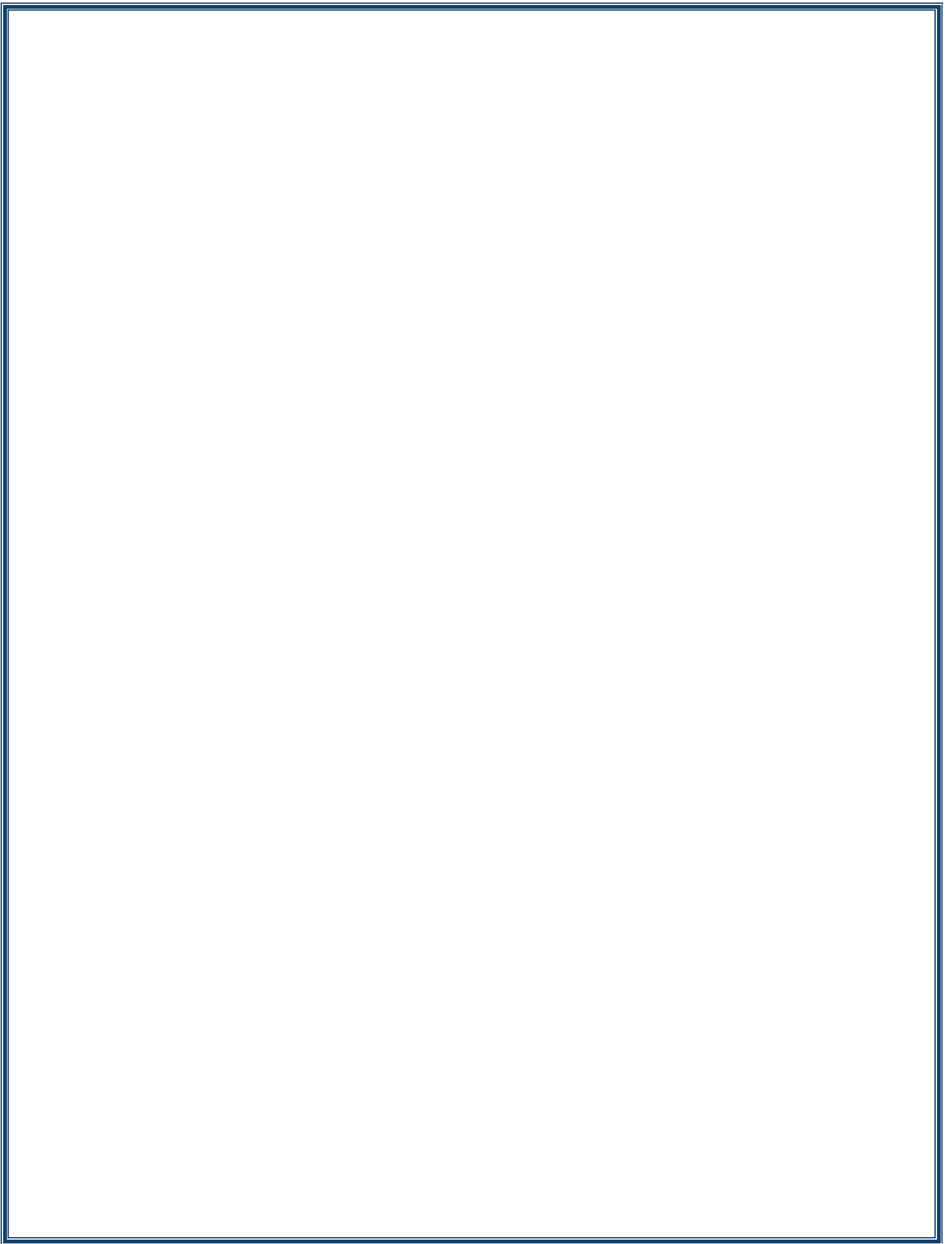
Respectfully submitted,

Grover P. Ingle, CFPS, CFI-II
State Fire Marshal

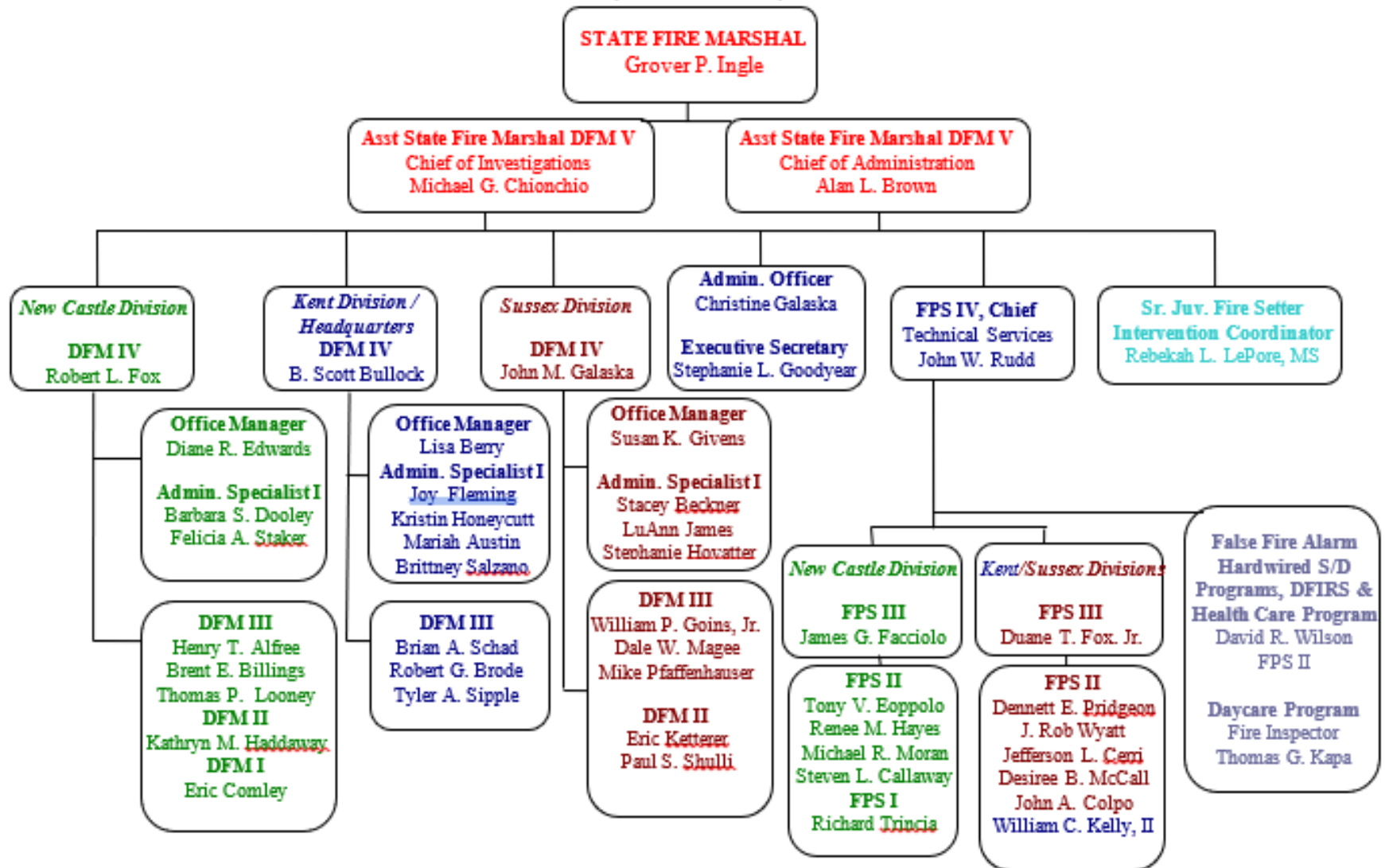


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OFFICE OF THE STATE FIRE MARSHAL ORGANIZATIONAL CHART



Office of the State Fire Marshal

In 1953, at the urging of the Volunteer Fire Service, the State Legislature created the Office of the State Fire Marshal and directed regulations reflecting nationally recognized standards, be promulgated to enhance life safety and property conservation for the citizens of Delaware.

The Office of the State Fire Marshal functions as an independent state agency under the State Fire Prevention Commission, which promulgates the State Fire Prevention Regulations, as enforced by the Office of the State Fire Marshal. As the law enforcement agency charged by 16 Del. C. §6612 with the suppression and investigation of arson, the Office of the State Fire Marshal provides the lead role in fire and arson investigations, statewide. The agency is charged with assisting the Chief of any fire department on request, inspections and code enforcement in health care facilities, educational occupancies, places of assembly, public accommodations, flammable and combustible liquids, flammable gases, explosives, and fireworks.

The Office of the State Fire Marshal is funded by revenues from the General Fund Appropriations of the State and by revenues generated by the agency from plan reviews of new construction and licensing fees associated with fire protection systems.

The Office of the State Fire Marshal is responsible for the comprehensive compliance with the State Statute for the installation of smoke detection devices in all residential occupancies, which greatly reduce the likelihood of injuries and deaths from fire.

The State Fire Marshal is appointed by the State Fire Prevention Commission and serves a four-year term. Under the direction of the State Fire Marshal, the daily operations of the agency are carried out by a team of dedicated staff members operating out of the headquarters division in Dover, with regional offices in New Castle and Georgetown.

The Office of the State Fire Marshal is to provide a fire safe environment for the citizens of Delaware and all who visit and carries out its mandate for Public Service, through the work of three divisions: Administration, Field Operations & Technical Services.

Administration Division

The Administration of the Office of the State Fire Marshal is carried out at the headquarters division located in Dover and has the responsibility to ensure the accountability, accuracy, and competency of all facets of the agency through the following:

- Program Planning & Evaluation
- Administrative Policies & Procedures
- Maintain Central Records
- Fiscal Management & Budget Preparation
- Personnel Management
- Physical Plant Requirements
- Delaware Fire Incident Reporting System
- Staff Training & Education
- On-going Review of State Fire Prevention Regulations
- Data Management
- Fire Loss/Fire Death Statistics
- Interaction with a variety of State Agencies, General Assembly, Federal, County & Local Government

Field Operations Division

Fire Investigations by Deputy Fire Marshals:

- Conduct fire investigations to determine the origin and cause of the fire
- Identify incendiary fires & other fires of criminal nature
- Investigate arson & other fires of criminal nature
- Pursue & apprehend those responsible for other fires of criminal nature & arson
- Investigate fatal fire incidents
- Assist the Department of Justice by providing expert testimony on arson fires and other fires of criminal or accidental nature
- Identify accidental fire causes to establish proactive preventative measures

Public Service, Life Safety, and Code Enforcement by Deputy Fire Marshals:

- Ensure compliance with the State Statute mandating the installation of smoke detectors in all residential occupancies
- Investigate complaints relative to violations of the State Fire Prevention Regulations
- Conduct on-site Life Safety, Fire Prevention and Code Enforcement Inspections in the following occupancies:

**Educational Occupancies * Places of Assembly * Public Accommodations * Mercantile * Business * Flammable & Combustible Liquids * Flammable Gases * Fireworks * Explosives * Government Buildings **

Technical Services Division

Fire Protection Specialists:

- Review all plans & specifications for construction of new buildings, additions, alterations, or modifications to existing buildings to ensure compliance with the State Fire Prevention Regulations
- Provide consultation to prospective developers & builders regarding their plans for projects in the concept phase
- Ensure required fire alarm and fire suppression systems are installed properly
- Coordinate all requests for alternative code requirements and all appeals to the State Fire Prevention Regulations
- Oversee the Licensing & Certification of Fire Alarm Signaling & Fire Suppression System contractors
- Investigate complaints relative to deficiencies in the installation of fire protection systems
- Provide technical support to other state & local jurisdictions

Special Programs

*Juvenile Intervention * K9 Accelerant Detection * Health Care Facility & Day Care Facility Certification * Major Incident Response Team * Assistance to Fire Chiefs * Delaware Fire Incident Reporting System * Quality Assurance * Hard Wired Smoke Detector * False Fire Alarm * Reduced Ignition Propensity Cigarette **

Promotions

Eric Ketterer

Deputy Fire Marshal II

Eric Ketterer began his employment with our office on March 16, 2020, as a Deputy Fire Marshal I. On October 10, 2021, Eric was promoted to Deputy Fire Marshal II, assigned to the Sussex County Division.

Thomas Looney

Deputy Fire Marshal III

Thomas Looney began his employment with our office on November 26, 2017, as a Deputy Fire Marshal I. On May 26, 2022, Tom was promoted to Deputy Fire Marshal III, assigned to the New Castle County Division.

Paul Shulli

Deputy Fire Marshal II

Paul Shulli began his employment with our office on June 21, 2021, as a Deputy Fire Marshal I. On June 21, 2022, Paul was promoted to Deputy Fire Marshal II, assigned to the Sussex County Division.

New Hires

Richard Trincia

Fire Protection Specialist I

Richard Trincia began his employment with our office on November 8, 2021, as a Fire Protection Specialist I, assigned to the New Castle County Division.

Lisa Berry

Office Manager

Lisa Berry began her employment with our office on January 16, 2022, as an Office Manager, assigned to the Kent County Division.

New Hires (Continued)

Eric Comley

Deputy Fire Marshal I

Eric Comley began his employment with our office on February 28, 2022, as a Deputy Fire Marshal I, assigned to the New Castle County Division.

Brittney Salzano

Administrative Specialist I

Brittney Salzano began her employment with our office on March 14, 2022, as an Administrative Specialist I, assigned to the Kent County Division.

Mariah Austin

Administrative Specialist I

Mariah Austin began her employment with our office on March 28, 2022, as an Administrative Specialist I, assigned to the Kent County Division.

Retirees

John Krzysiak

Deputy Fire Marshal III

John Krzysiak began his employment with our office on June 1, 2004, as a Deputy Fire Marshal I, assigned to the New Castle County Division. He retired on August 31, 2021.

James Hedrick

Deputy Fire Marshal III

James Hedrick began his employment with our office on August 17, 2009, as a Deputy Fire Marshal I, assigned to the New Castle County Division. He retired on July 1, 2022.

FY-22 Financial Report***General Funds***

<u><i>GF Appropriations</i></u>	<u><i>Available Funds</i></u>	<u><i>Encumbrances</i></u>	<u><i>Current Yr Expenditures</i></u>
Personnel (Salaries)	\$2,406,700.00	\$0.00	\$2,314,561.01
Contractual	\$308,200.00	\$25,141.42	\$ 283,058.58
Energy	\$55,600.00	\$2,330.54	\$38,407.68
Supplies	\$23,400.00	\$0.00	\$23,400.00
<i>Grand Fund Totals</i>	<i>\$2,793,900.00</i>	<i>\$27,471.96</i>	<i>\$2,659,427.27</i>

Appropriated Special Funds

<u><i>Appropriations</i></u>	<u><i>Revenue Received FY 22</i></u>
Amusement-8601 (70002)	\$1,410.00
Assembly Licensing-8607 (70003)	\$21,625.00
Inspections-8605 (70004)	\$262,855.00
Day Care-8614 (70007)	\$51,818.00
Explosives-8602 (70010)	\$125.00
Fireworks-8603 (70014)	\$3,190.00
In-House License-8616 (70015)	\$0.00
Licensing-8610 (70017)	\$13,900.00
Occup/Permits/License-8606 (70019)	\$2,325.00
Systems License-8609 (70026)	\$20,050.00
Misc. Revenue (70028)	\$46,168.00
Plan Review-8604 (70108)	\$3,420,027.36
<i>ASF Sub Total</i>	<i>\$3,843,493.36</i>
<i>FY 21 Holding Accounts Carry Over</i>	<i>\$12,199,298.73</i>
<i>ASF Grand Total</i>	<i>\$16,042,792.09</i>

<u><i>ASF Appropriations</i></u>	<u><i>Available Funds</i></u>	<u><i>Encumbrances</i></u>	<u><i>Current Yr Expenditures</i></u>
Personnel (Salaries)	\$1,745,200.00	\$0.00	\$1,794,101.58*
Travel	\$34,000.00	\$0.00	\$4,257.13
Contractual	\$366,800.00	\$0.00	\$123,215.16
Supplies	\$81,000.00	\$30,271.30	\$20,857.11
Capital	\$196,200.00	\$17,870.51	\$23,037.60
Revenue Refund	\$1,500.00	\$0.00	\$1,500.00
<i>ASF Spending Totals</i>	<i>\$2,424,700.00</i>	<i>\$48,141.81</i>	<i>\$1,966,968.58</i>
<i>FY 22 Holding Acct Carry Over</i>			<i>\$14,027,681.70</i>
<i>ASF Spending Grand Total</i>			<i>\$2,015,110.39</i>

*Transferred \$70,000 from ASF Contractual Appropriation to cover Personnel/salaries deficit

Restricted Non-Appropriated Special Funds

<u><i>Appropriations</i></u>	<u><i>Available Funds</i></u>	<u><i>Revenue Rec'd</i></u>	<u><i>Expenditures</i></u>	<u><i>Remaining Funds</i></u>
Cigarette Certification (21002)	\$430,005.30	\$40,500.00	\$260,000.00	\$210,505.30
Detector Fund (20345)	\$3,413.57	\$600.00	\$0.00	\$4,013.57
Hearing Impaired Detectors (20511)	\$0.00	\$0.00	\$0.00	\$0.00
Juv. Intervention Program (20566)	\$0.00	\$0.00	\$0.00	\$0.00
<i>NSF Totals</i>	<i>\$433,418.87</i>	<i>\$41,100.00</i>	<i>\$260,000.00</i>	<i>\$214,518.87</i>
<i>Total Cash on Hand June 30, 2022</i>				<i>\$14,242,200.57</i>

Technical Services

Plan Review



Technical Services Division staff reviews plans for compliance with the Delaware State Fire Prevention Regulations for various project types statewide.

- **Site Plans:** Technical Services staff review site plans to ensure access for fire, emergency medical, and law enforcement personnel; they review any required fire lanes, fire hydrant locations, fire department connection locations, and in cases where no water for fire protection is available, building setbacks from property lines. Some of the site plan types reviewed include:
 - Residential subdivisions, including one- and two- family dwellings, duplexes, and townhomes.
 - Multi-Residential sites, including apartment buildings, hotels, dormitories, lodging and rooming houses, and residential board and care facilities.
 - Educational sites, including public and private schools and any athletic facilities.
 - Health Care occupancies, including hospitals, nursing homes, and ambulatory health care facilities.
 - Detention and Correctional sites.
 - Commercial sites for business and retail use.
 - Assembly sites, including Places of Worship, restaurants, and banquet facilities.
 - Storage and Industrial sites, including mini-storage, warehouse, and distribution facilities, manufacturing facilities, poultry processing plants, and research and development laboratories.
 - Bulk storage tank locations for flammable/combustible liquids and other hazardous materials.
 - Sites proposing photovoltaic (solar) ground arrays and other “green” energy types of equipment.
- **Construction:** Technical Services staff review construction plans for all new buildings, additions, renovations, and tenant fit-outs, including small businesses and “Mom and Pop” type stores to multi-story state of the art research facilities. Also included are unique reviews for infrastructure improvements, including water main renewal and extension projects, cellular towers, and 800Mhz radio towers.
- **Fire Protection Systems:** Technical Services staff review plan submissions for fire sprinkler systems, fire alarm systems, hood and hood fire suppression systems, standpipe systems, clean agent systems, fixed fire suppression systems, and fire pump installations.
- **Tank Reviews:** Technical Services staff review plans for all above ground, underground, and mounded tanks for the storage of flammable and combustible liquids and any dispensing systems for these tanks. Propane tank installations, including retail propane tank exchange locations, are reviewed. Tanks storing bulk hazardous materials such as hydrogen are also reviewed.

Technical Services Division

Looking to the Future

To improve the delivery of services to our clients, Technical Services staff have been meeting with various jurisdictions to see how they handle the plan review, inspections, code enforcement, and licensing disciplines.

As part of this review, field trips to several jurisdictions were made to review what type of software and hardware their staff uses and to see how electronic plan submission, permitting, and licensing might function at the State level.

Many design professionals, construction firms, and licensed fire protection vendors are using electronic plans both in the office and at the construction site, and it is the Office of the State Fire Marshal's intent to move many of our permits and licensing to electronic submissions and payments.

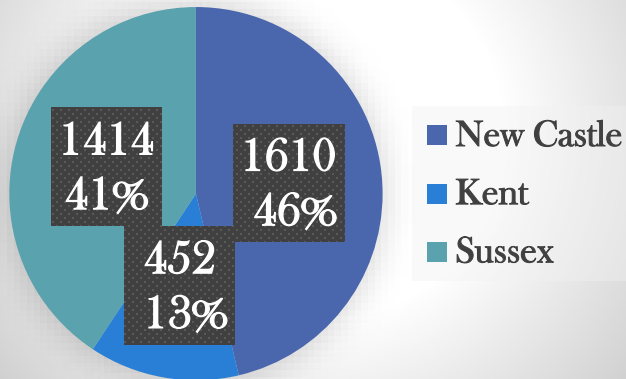
As part of this review, our agency also realizes that there are those throughout the State who may not be comfortable with a computer or may not have access to a computer for this type of submission, so we will also continue traditional submissions and payments as well to assist our clients.

The Technical Services Division will continue to explore ways to stay at the forefront of life safety and fire protection, as well as provide the expertise, professionalism, and timely delivery of services expected by the many clients and citizens we serve throughout the State of Delaware.



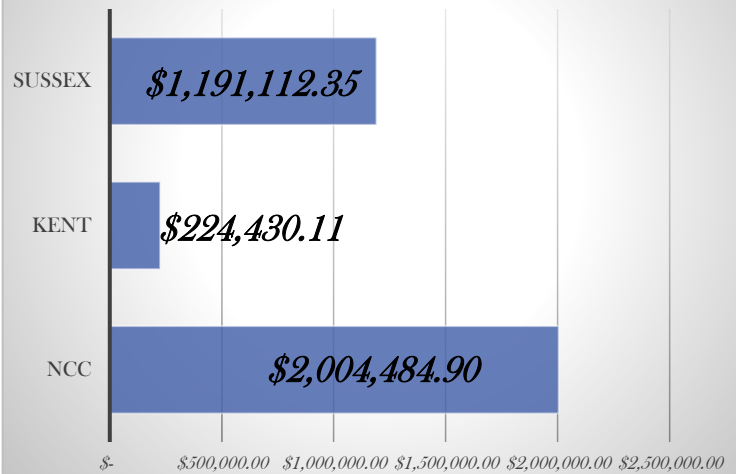
Plan Reviews By County

3476 Total

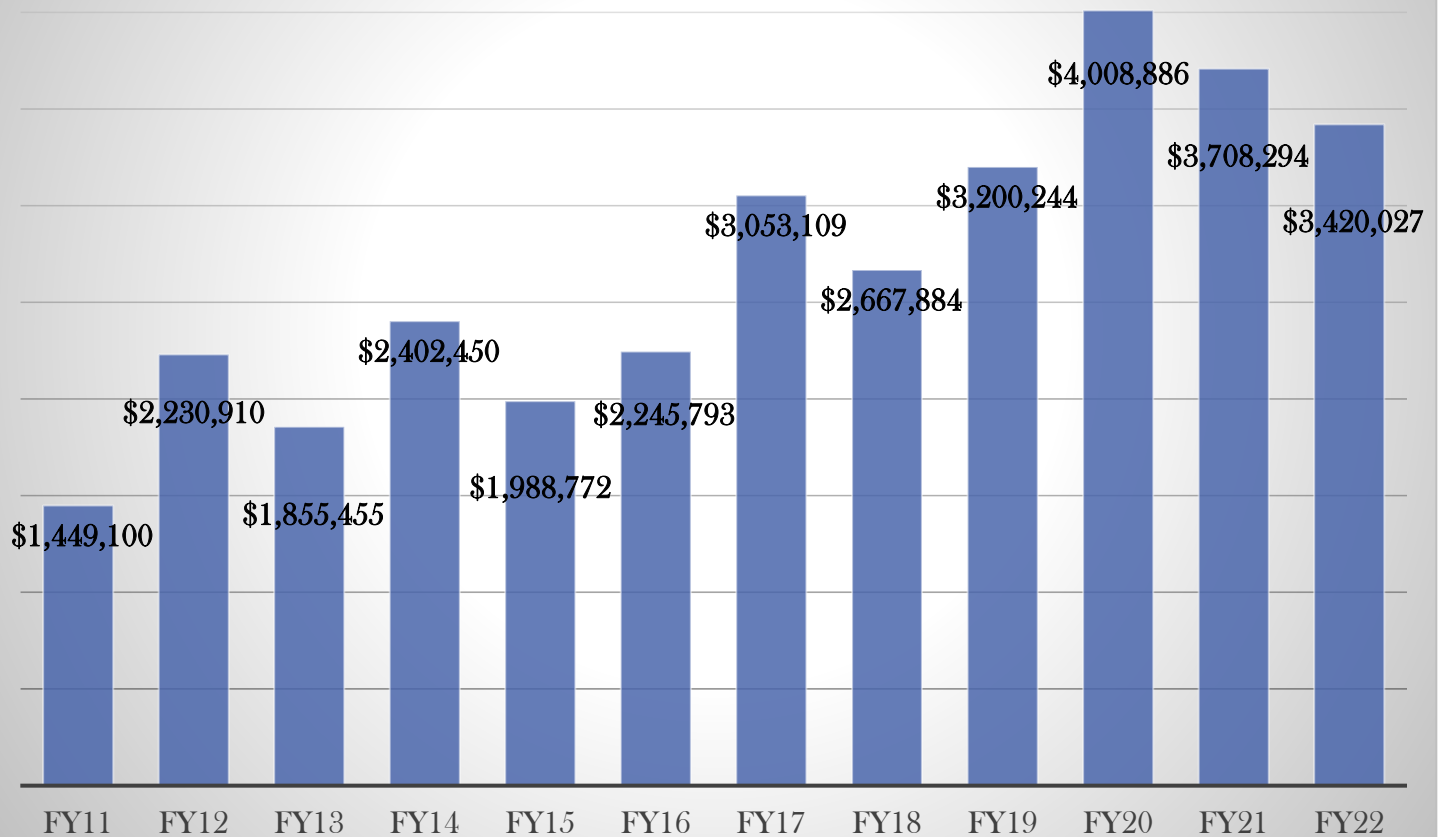


FY 22 Plan Review User Fee

By County



FY11 to FY22 Annual Plan Review User Fees (PRUF)





Technical Services Division

Inspections

Technical Services Division staff conduct inspections to verify compliance with the Delaware State Fire Prevention Regulations for various project types and occupancies statewide. Examples of some of these inspections include:

Site Inspections: Technical Services staff inspect sites to ensure that all required access for fire, emergency medical services, and law enforcement personnel complies with the site plan reviewed and approved by staff. All fire lanes, fire department connections, and fire hydrants are inspected to verify that they are installed and properly marked in compliance with the Delaware Fire Prevention Regulations.

Construction Inspections: Technical Services staff inspect new buildings, additions, renovations, tenant fit outs, and occupancy changes to ensure that what is approved on the plan submitted is what was constructed. Depending on the size of the project, several inspections may be performed, including rough-in or close-in inspections, which are done while the building's "skeleton" is still exposed, and final inspections, which verify that the project complies with the Delaware State Fire Prevention Regulations and permits the owner to pursue a Certificate of Occupancy from the local building code official once Technical Services staff leave their approval sticker on-site.

Fire Protection System Inspections: Technical Services staff conduct final acceptance testing in accordance with nationally recognized codes and standards that are adopted by the Delaware State Fire Prevention Regulations for all fire sprinkler systems, fire alarm systems, hood and hood fire suppression systems, standpipe systems, clean agent systems, fixed fire suppression systems, and fire pump installations that have been submitted and approved for installation. Depending on the size and complexity of the system, several of these tests may be required. Construction projects will not receive a final inspection approval sticker unless all fire protection systems pass their acceptance testing.

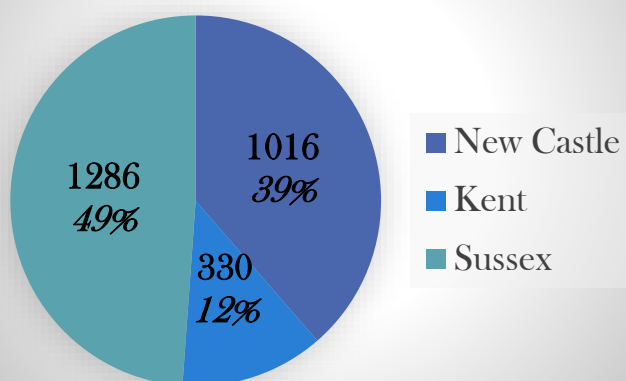
Tank Reviews Inspections: Technical Services staff inspect above ground, underground, and mounded tanks installed for the storage of flammable and combustible liquids and any dispensing devices for these tanks. Tanks storing bulk hazardous materials such as propane and hydrogen are also inspected. Tanks are not permitted to be placed in service until they pass their inspection.

Day Care Inspections: Our Day Care Inspector performs annual inspections on all Group Daycare Homes, Day Care Centers, and other facilities utilized for the supervision of children. These inspections are conducted to determine compliance with the Delaware State Fire Prevention Regulations, and once approved, the Day Care Inspector provides the approval paperwork to the Office of Child Care Licensing (DSCYF) to meet DSCYF’s obligation to approve “providers” to operate Day Cares in accordance with the guidelines of DSCYF’s DELACARE requirements.

Health Care Inspections: Our Health Care Inspector performs annual inspections and surveys for health care occupancies (including hospitals, nursing homes, and limited care facilities) to verify compliance with the Delaware State Fire Prevention Regulations. The Health Care Inspector coordinates with the Department of Health and Social Services in support of their mission to improve the quality of life for Delaware’s citizens by protecting vulnerable populations from fire and life safety hazards. These inspections are also a requirement for any health care facility to receive funds from the federal Center for Medicare and Medicaid Services (CMS). Additionally, ambulatory surgery centers are inspected for compliance with the Delaware State Fire Prevention Regulations for the facility to receive an annual license from the Department of Health and Social Services’ Office of Health Care Facilities Licensing and Certifications.

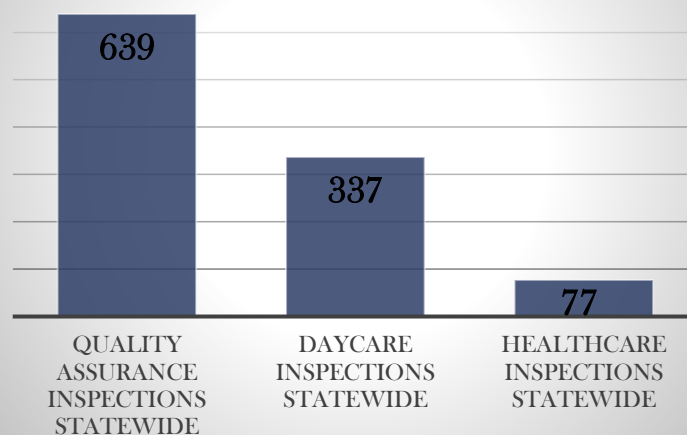
Inspections Statewide

2632 Total



Other Inspections Statewide

1053 Total



ADDITIONAL TASKS

Because of their special technical knowledge and expertise, supervisory staff in the Technical Services Division provided advisory assistance to several organizations.

DNREC's Tank Management Section	Represent the Agency on their Advisory Committee.
Office of Child Care Licensing	Provides technical consultation and advice as needed.
City of Wilmington Fire Marshal's Office	Assist with plan reviews; continued availability in an advisory role as needed.
City of Newark Fire Marshal's Office	Assist with plan reviews and inspections; continued availability in an advisory role as needed.
National Fire Protection Association	Agency provides 2 principal Members and 3 Alternate Members to various NFPA Technical Committees.
County & Municipal Technical Advisory Committees	Participates in the advisory process in New Castle, Kent, and Sussex Counties, and several Cities and Towns.
Lower Delaware & Maryland Building Code Officials Association	Represents the Agency; attends regularly scheduled meetings to discuss code enforcement issues in Kent County and Sussex County.
Delaware Building Officials Association	Represents the Agency; attends regularly scheduled meetings to discuss local code enforcement issues in New Castle County.
Delaware Residential Fire Sprinkler Coalition	Staff members attend and participate in scheduled meetings. Participates in a "live-burn" demonstration as needed.
University of Delaware Department of Environmental Health and Safety	Assist in the fire safety training of the University's Resident Assistants.
Preliminary Land Use Service (PLUS) Office of State Planning Coordination	The Office of the State Fire Marshal continues its support of the PLUS program administered through the Office of State Planning Coordination (OSPC). In FY-21, a representative of the State Fire Marshal has attended and participated in the monthly meetings remotely along with developers of proposed projects and representative of other State agencies.

Fiscal Year 2022

Projects Exceeding Two Million Dollars



2021 Cooler and Dock Addition
2021 Sandcastle Upgrades
500 Dupont Field Blvd - Office Building # 2
650 Churchmans Road - Flex Building
Academia Antonia Alonso
Advanced Materials Technology
ALDI Millsboro
AT HOME Store # 332
Avenue North Building 9
Bank of America Cooling Tower 3 & 4
Barley Mill Plaza - New 4 Story Apt. Building
Bayhealth Rt 9 MOB/FSED
Bayhealth South - Women's Services Expansion
Bayside Self Storage
Bean Conference Center
Best Buy
Brader Elementary HVAC Renovation Phase 1
Brader Elementary HVAC Renovation Phase 2
Building A - Self - Storage Building
Bus and Rail Transit Center
Cadia Pike Creek Nursing
Cambria Hotel
CCHS 5th Floor Patient Unit Upgrade
CCHS Pediatric Observation & Inpatient Unit
Cedar Bay Apartment Building 3
Cheddar's Scratch Kitchen
Coastal Station Apartments (Phase 2)
Collector's Universe
Cornell Business Park Lot 2 Building 501
Courtyard by Marriott
Crystal Run Elementary School

DTCC B- Wing ADD
Delcastle HS Temporary Classroom Trailers
DelDot Maintenance Building
Dupont Kalrez TFO
Faithful Friends Animal Resource Center
Fitness Center
Fuji Film Project Maxwell Building A & B
Harmony at Hockessin
Harvard Business Service Inc
Hung Vong Food Market
LaMotte Company
Las Americas Aspira Academy High School
Lewes Middle School
Little Sisters of the Poor - B Wing Phase I
May B. Leasure Elem. HVAC Upgrades
Meadowood Behavioral Health Addition
Merck Building 4 Electrical Project
Miller Metal Fabrication
MOB/FSED
Mountaire Process Water Treatment
N/AIDHC NICU PHASE 2 (2CN)
Prelude Therapeutics
Roxana Apartments Bldg 1
Shell & Core Renovations
Siemens Atellica Insourcing Addition
Starboard Claw Restaurant
Sussex County EMS Addition
The Residence at Rehoboth Bay Building B
Thurgood Marshall Elementary MEP
Ultra Beauty - Rehoboth
YMCA - Middletown

In addition to above, multiple educational projects were submitted for public and private schools statewide.

Technical Services Division

Fire Protection Company Licensing

Quality Assurance Program



The Delaware State Fire Prevention Regulations requires that all companies that design, install, and maintain fire protection systems be licensed annually by the Office of the State Fire Marshal.

In Fiscal Year 2022, there were 227 Licenses issued to companies providing services to owners of Fire Alarm Signaling systems and/or Fire Suppression Systems. Employed by those companies are Certificate Holders which the Office of the State Fire Marshal recognizes as the licensed company's party of responsible charge. Additionally, there are 155 persons employed by the licensed Fire Suppression companies that possess the Certificate necessary to conduct the inspection and testing of water-based fire protection systems.

The Office of the State Fire Marshal's dedicated Administrative Staff handles the processing of all licensing paperwork, fees, Certificates of Inspection, and Major Deficiency Reports in addition to fielding inquiries from licensed contractors and those wishing to obtain a license to design, install, and maintain fire protection systems.

Major Deficiency Reports are sent to the Divisional Office in the County in which the deficiency originated for investigation by Technical Services Division Staff or Deputy Fire Marshals to verify a fire protection system does indeed have a deficiency and corrective action is explained to the owner or the owner's representative.

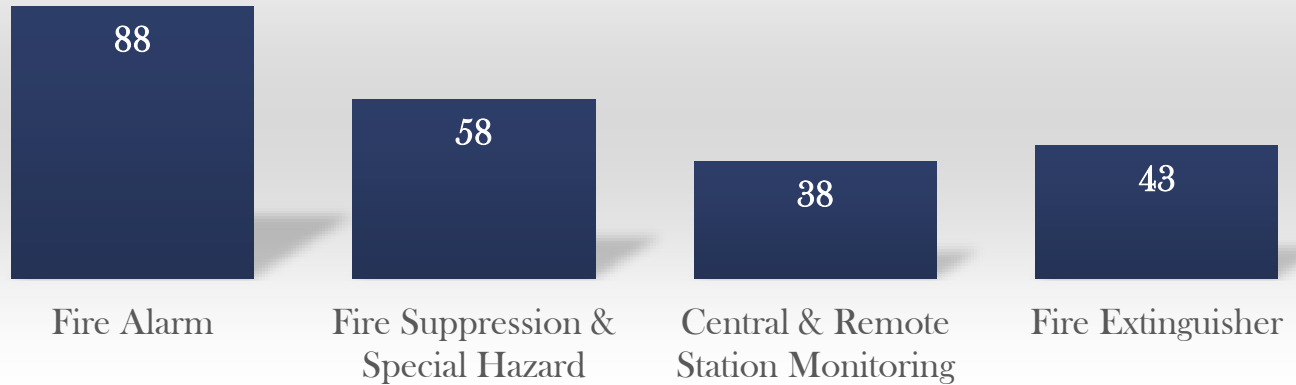
If the corrective action can be performed while staff is on site, this will be noted in the file and the deficiency will be cleared. If corrective action cannot be performed while staff is on site, then a Notice of Violation (NOV) is written with the deficiency noted and what corrective action must be taken to address the deficiency. If the deficiency is to such a degree that it will take time and funding to address, then a Plan of Corrective Action is provided to the Office of the State Fire Marshal for review and approval.

There are currently over 16,600 fire protection systems in service across the State of Delaware, including fire alarm signaling systems, fire suppression systems, standpipe systems, fire pumps, special hazard systems, and commercial cooking hood suppression systems.

The Licensing Program is currently under revision to simplify the licensing categories and to allow for electronic submission and payment of fees by licensed vendors.

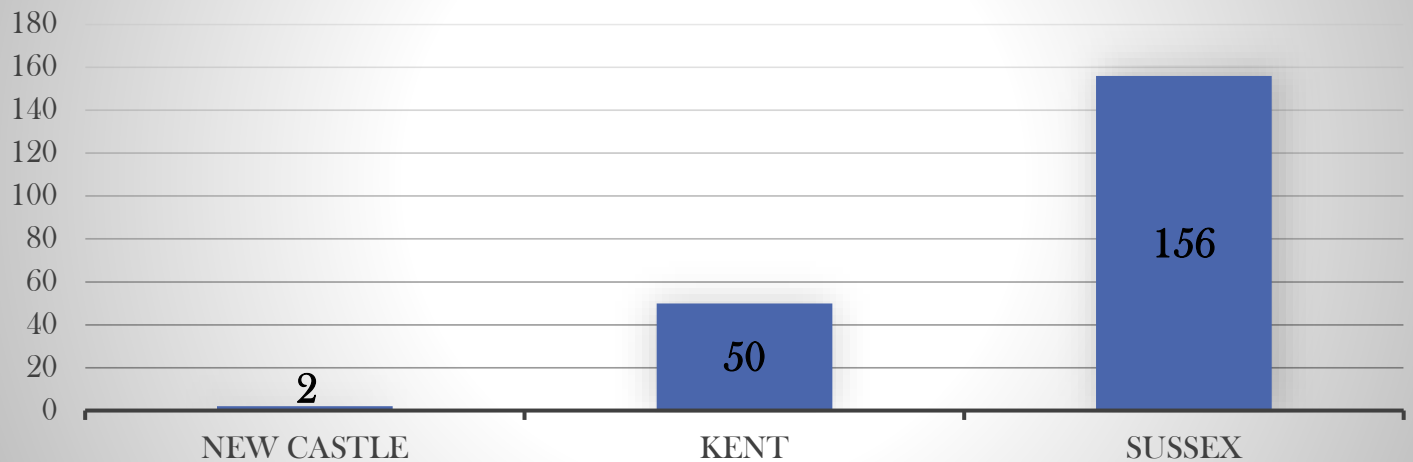
Licenses Issued By Type

227 Total



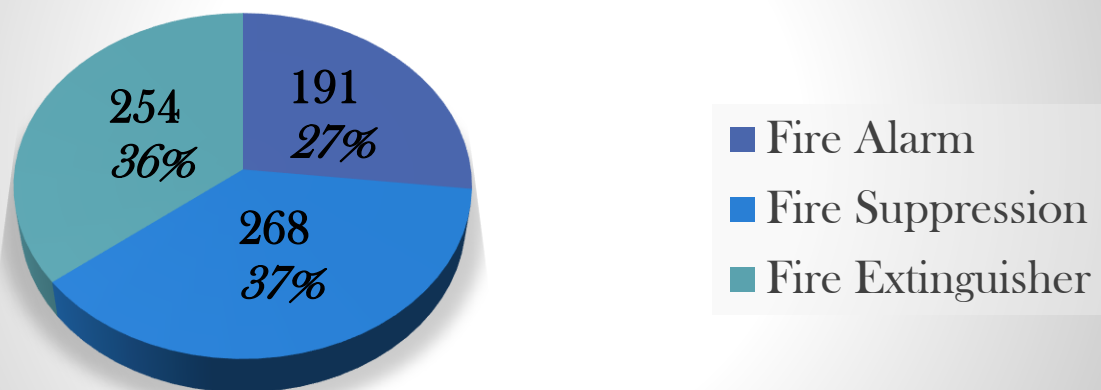
Fire Protection System Notice of Violations Issued

208 Total



Certificate Holders By Type

713 Total





Residential Fire Sprinkler Systems



- According to the National Fire Protection Association (NFPA), in 2020 home fires caused 2,230 civilian fire deaths, 8,600 injuries, and \$6.8 billion dollars in direct property damage.
- Today's home fires burn faster due to the prevalence of plastics and synthetics in modern furnishings, open floor plans, and homes on fire experience structural failure and even collapse in a matter of minutes due to the use of lightweight pre-engineered wood construction.
- The NFPA reports in 2021 that the civilian fire death rate was 89% lower in structures with fire sprinkler systems, and the rate of firefighter injuries was 60% lower in fires with fire sprinkler systems installed than in fires without fire sprinkler systems.
- The Office of the State Fire Marshal encourages all developers and builders to install residential fire sprinkler systems (NFPA 13D systems) in all one- and two-family dwellings and townhomes, and our agency will continue to work with local planning and building code officials to assist them with the implementation of these effective life safety systems.

For the timeline of July 1, 2021, to June 30, 2022, the following NFPA 13D-compliant residential fire sprinkler systems were reviewed and inspected by Technical Services Division Staff:

New Castle County: 18

Sussex County: 63

The average cost to install a NFPA 13D-Compliant Residential Fire Sprinkler System in the State of Delaware:

\$1.85 per square foot with a direct tie-in to a domestic water supply

\$2.25 per square foot with a tank and pump

For NFPA 13D-compliant fire sprinkler systems, each system is designed for activation of two sprinkler heads, with each head flowing 13 gallons a minute for 10 minutes, for a total flow of 26 gallons per minute.

Typical fire hose handlines used by the fire department each will flow between 150-325 gallons a minute, usually with two handlines in service at the same time for an extended period.

If the fire forces the fire department to withdraw and switch to exterior master streams, each of those typically flows between 500-1,250 gallons per minute for an extended period.

The **PGA BMW** *Championship*



On February 17, 2022, a virtual meeting was held between Western Golf Association, New Castle County Department of Land Use, and the Office of the State Fire Marshal to discuss the upcoming PGA BMW Championship, which would be held at the Wilmington Country Club on August 14, 2022, through August 21, 2022. The discussion focused on permits and inspection of the various temporary bleachers, grandstand, multiple large tents, temporary beverage and cooking facilities, news media camera platforms, the use of the club's existing facilities, and an off-site command center.

As the winter led into the spring, several additional meetings were held to discuss the permitting and inspections process, as well as additional security that would be required for the event. These meetings included the Office of the State Fire Marshal staff, Delaware State Police, New Castle County Police, and members of the Federal Bureau of Investigation's Joint Terrorism Task Force (JTTF).

Beginning two weeks prior to the event, staff began conducting coordinated inspections of the existing buildings as well as the new temporary structures for the event with New Castle County officials to ensure that all structures would be ready by event kickoff.

During the week of the event, Office of the State Fire Marshal staff were on-site and additional staff were on standby to respond to the site if needed.

This event showcased the importance of inter-agency coordination and planning and by all accounts was a rousing success and put the State of Delaware front and center in the golfing world.





Accelerant Detection Canine Unit

*CDFM John Galaska
& K9 Tanya (In Service 2014-2022)
DFM Michael Pfaffenhauser
& K9 PJ (May 2022)*



The Office of the State Fire Marshal Accelerant Detection K9 Team has served the state since 1990. The K9 Unit examines fire scenes throughout the state for the presence of accelerants or ignitable liquids, such as gasoline or lighter fluid that may be used to start or spread a fire. In 1997 the agency received a grant from State Farm Insurance Company for an Accelerant Detection K9. This same grant was received and utilized for the current K9. The grant provides the K9 and initial training, lodging and expenses for certification.

The Accelerant Detection K9 Unit has been staffed since 2014 by **K9 Tanya**, a Black Labrador Retriever and handler Chief **Deputy Fire Marshal John M. Galaska**. Chief Deputy Galaska has been a handler in the K9 program since 2009, first working with the late K9 Sparks as a secondary handler under Deputy State Fire Marshal Brian Schad and then being partnered with K9 Tanya as primary handler. The Team of Tanya and handler Chief Deputy Galaska are required to recertify each year. In September 2022 the team successfully recertified. This past fiscal year marks Tanya's 8th year of dedicated service to the citizens of the State of Delaware. Tanya has stood at the ready to serve 24 hours a day, 7 days a week for eight years. This year **K9 Tanya officially retired as of May 2022**. K9 Tanya will now reside with Chief Deputy Galaska and his family.

The current K9 unit is staffed by **Deputy State Fire Marshal III Michael Pfaffenhauser** and **K9 PJ** who successfully completed their training and team certification as of April 2022. The Office of the State Fire Marshal proudly welcomes K9 PJ and Deputy State Fire Marshal III Michael Pfaffenhauser to active duty. The Team has already been busy responding to calls for service and performing public demonstrations.

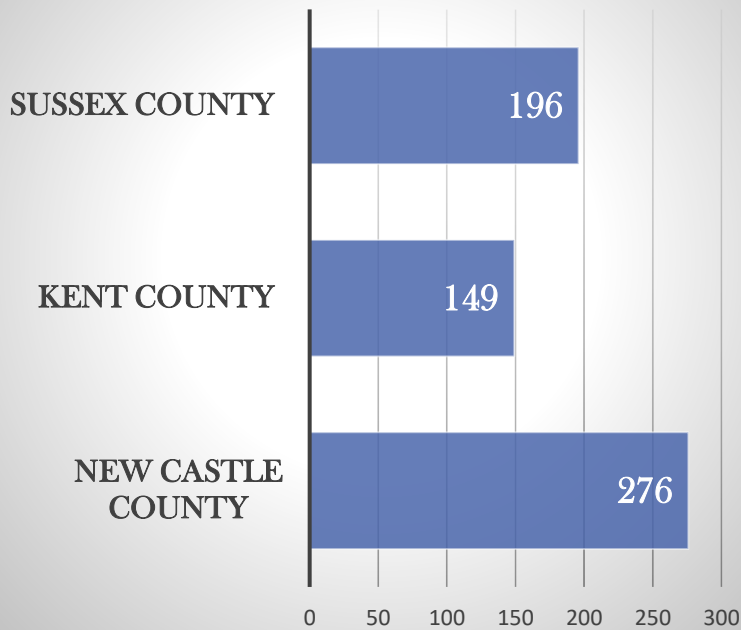
The K9 Team is a food reward team K9 which refers to how the K9 is trained. The K9 is required to make a positive alert coming to a final response on an accelerant to be rewarded with a handful of food. To keep up with food intake the K9 and trainer follow a very intensive daily training processes delivered at different times and for random durations involving actual fire scenes, training scenarios and training aids. This process is repeated until the K9 receives its daily allotment of food which varies from day to day and is regulated by the handler. The K9 is a "companion dog" who lives and travels with its Deputy Fire Marshal handler. A strong team bond is formed between handler and K9 through the intensive training regimen, however, Tanya and PJ are faithful friends and companions to all at the State Fire Marshal's Office.

This past year K9 Tanya and Chief Deputy Galaska trained well over **1000** separate times. This training represents thousands of trips for K9 Tanya to Galaska's hand for food after a positive final response alert. K9 Tanya responded to **70** fire scenes this fiscal year and was utilized in her operational capacity **36** times. These operational K9 examinations included major loss fire scenes, personal injury fire scenes as well as fatal fire scenes. Successful demonstrations were performed for Boy Scouts of America, Delaware State Police Academy, New Castle County Police Academy, Sussex County Fire Chiefs, Department of Motor Vehicles and Sussex County CHEER Centers. The K9 Team can provide regional assistance to other agencies when needed and this fiscal year assistance was given to the Wilmington Fire Department as well as on call standby for the Maryland State Fire Marshal's Office. K9 Tanya and handler Deputy Galaska were featured on a 2014 web series presented by celebrity K9 trainer Victoria Stilwell. This web series, as well as more information on the Arson Dog Program, is available for viewing at www.arsondog.org

Investigations

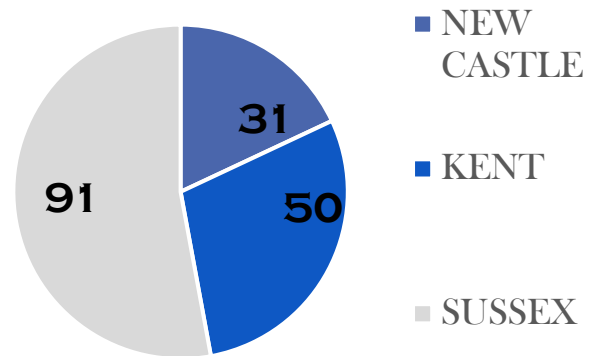
Fire Investigations Statewide

621 Total



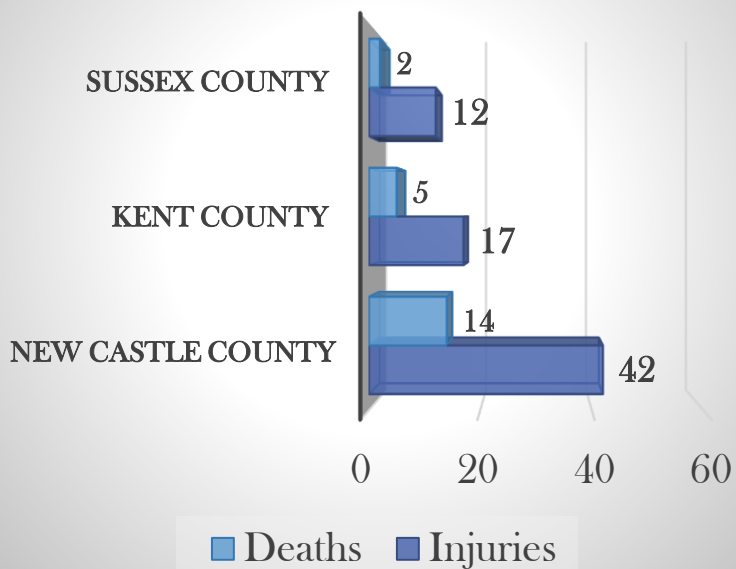
Fire Code Complaints Statewide

172 Total



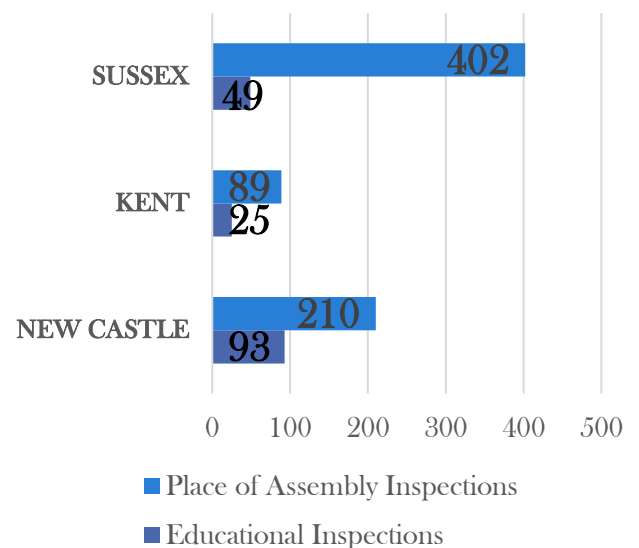
Injuries & Deaths Statewide

71 Injuries / 21 Deaths



Educational and Place of Assembly Inspections

868 Total



Major Incident Response Team

July 1, 2021 - June 30, 2022

Total Fire Deaths: **21**
Total Fatalities **WITH** Working Smoke Detectors: **4**
Total Fatalities **WITHOUT** Smoke Detectors: **17**
Total Fatalities **WITH** Fire Suppression System: **0**
Total Fatalities **WITHOUT** Fire Suppression System: **21**

New Castle County: **14**
Kent County: **5**
Sussex: **2**

Date of Fire: Tuesday, August 3, 2021
Time of Alarm: 1002 Hours
Victim: W/F 33 years old
Location: **Simonds Drive - New Castle**
Fire Department: Holloway Terrace Fire Company
Type of Incident: House Fire
Origin: Living Room
Cause: Under Investigation
Cause of Death: Smoke Inhalation
Smoke Detectors: No
Fire Suppression System: No

Date of Fire: Saturday, December 25, 2021
Time of Alarm: 1902 Hours
Victim: W/F 59 years old
Location: **Holly Spring Road - Felton**
Fire Department: Felton Community Fire Company
Type of Incident: Automobile Fire
Origin: Vehicle Exhaust
Cause: Ignition of Ground Cover
Cause of Death: Thermal Burns/Smoke Inhalation
Smoke Detectors: No
Fire Suppression System: No

Date of Fire: Tuesday, September 21, 2021
Time of Alarm: 0013 Hours
Victim: B/M 62 years old
B/M 52 years old
Location: **Clifford Brown Walk - Wilm**
Fire Department: Wilmington Fire Department
Type of Incident: House Fire
Origin: Under Investigation
Cause: Under Investigation
Cause of Death: Smoke Inhalation
Smoke Detectors: No
Fire Suppression System: No

Date of Fire: Sunday, January 2, 2022
Time of Alarm: 1849 Hours
Victim: W/M 36 years old
Location: **Omar Road - Frankford**
Fire Department: Millville Volunteer Fire Company
Type of Incident: Building Fire
Origin: 2nd Floor Apartment Living Room
Cause: Under Investigation
Cause of Death: Smoke Inhalation/Thermal Burns
Smoke Detectors: Yes
Fire Suppression System: No

Date of Fire: Thursday, October 28, 2021
Time of Alarm: 0709 Hours
Victim: W/F 75 years old
Location: **Augusta Drive - Newark**
Fire Department: Aetna Hose, Hook & Ladder Co.
Type of Incident: House Fire
Origin: Living Room
Cause: Open Flame
Cause of Death: Smoke Inhalation
Smoke Detectors: No
Fire Suppression System: No

Date of Fire: Monday, January 17, 2022
Time of Alarm: 0932 Hours
Victim: W/F 59 years old
Location: **Oak Drive - Middletown**
Fire Department: Odessa Fire Company
Type of Incident: House Fire
Origin: 1st Floor Living Room
Cause: Under Investigation
Cause of Death: Thermal Burns
Smoke Detectors: No
Fire Suppression System: No

Date of Fire: Friday, October 29, 2021
Time of Alarm: 0543 Hours
Victim: W/M 68 years old
Location: **Carrolls Ave - Delmar**
Fire Department: Delmar Volunteer Fire Company
Type of Incident: House Trailer Fire
Origin: Bedroom
Cause: Space Heater
Cause of Death: Thermal Burns/Smoke Inhalation
Smoke Detectors: No
Fire Suppression System: No

Date of Fire: Wednesday, January 19, 2022
Time of Alarm: 2202 Hours
Victim: W/F 82 years old
Location: **Council Circle - Newark**
Fire Department: Christiana Fire Company
Type of Incident: House Fire
Origin: 1st Floor Living Room
Cause: Discarded Smoking Material
Cause of Death: Smoke Inhalation/Thermal Burns
Smoke Detectors: Yes
Fire Suppression System: No

Date of Fire: Sunday, February 6, 2022
 Time of Alarm: 1211 Hours
 Victim: W/F 9 years old, W/F 38 years old & W/F 49 years old
 Location: **Main Street - Little Creek**
 Fire Department: Little Creek Volunteer Fire Co.
 Type of Incident: House Fire
 Origin: 1st Floor Living Room
 Cause: Portable Space Heater Ignited Combustibles
 Cause of Death: Smoke Inhalation/Thermal Burns
 Smoke Detectors: No
 Fire Suppression System: No

Date of Fire: Wednesday, February 16, 2022
 Time of Alarm: 0958 Hours
 Victim: W/M 79 years old
 Location: **Gregory Drive - Newark**
 Fire Department: Christiana Fire Company
 Type of Incident: Automobile Fire
 Origin: Passenger Compartment
 Cause: Under Investigation
 Cause of Death: Smoke Inhalation
 Smoke Detectors: No
 Fire Suppression System: No

Date of Fire: Saturday, February 26, 2022
 Time of Alarm: 0256 Hours
 Victim: W/F 71 years old
 Location: **Center Street - Saint Georges**
 Fire Department: Delaware City Fire Company
 Type of Incident: House Fire
 Origin: Under Investigation
 Cause: Under Investigation
 Cause of Death: Thermal Burns
 Smoke Detectors: Yes
 Fire Suppression System: No

Date of Fire: Saturday, March 5, 2022
 Time of Alarm: 0246 Hours
 Victim: W/M 67 years old
 Location: **W. Brigantine Court - Wilmington**
 Fire Department: Mill Creek Fire Company
 Type of Incident: Building Fire
 Origin: Under Investigation
 Cause: Pending Determination
 Cause of Death: Smoke Inhalation/Thermal Burns
 Smoke Detectors: Yes
 Fire Suppression System: No

Date of Fire: Tuesday, March 8, 2022
 Time of Alarm: 0346 Hours
 Victim: W/F 53 years old
 Location: **N. Dupont Highway - New Castle**
 Fire Department: Wilmington Manor Fire Company
 Type of Incident: Building Fire
 Origin: Room 271 - Mattress
 Cause: Incendiary
 Cause of Death: Smoke Inhalation/Thermal Burns
 Smoke Detectors: Yes
 Fire Suppression System: No

Date of Fire: Saturday, March 12, 2022
 Time of Alarm: 0023 Hours
 Victim: B/F 71 years old
 Location: **E. 17th Street - Wilmington**
 Fire Department: Wilmington Fire Department
 Type of Incident: House Fire
 Origin: Under Investigation
 Cause: Under Investigation
 Cause of Death: Smoke Inhalation
 Smoke Detectors: No
 Fire Suppression System: No

Date of Fire: Wednesday, March 16, 2022
 Time of Alarm: 0241 Hours
 Victim: B/M 59 years old
 Location: **West Lockerman Street - Dover**
 Fire Department: Dover Fire Department
 Type of Incident: Building Fire
 Origin: Under Investigation
 Cause: Under Investigation
 Cause of Death: Pending
 Smoke Detectors: Yes
 Fire Suppression System: No

Date of Fire: Saturday, April 3, 2022
 Time of Alarm: 0609 Hours
 Victim: B/F 72 years old; B/F 90 years old
 Location: **Onaway Place - Garfield Park**
 Fire Department: Minquadales Fire Company
 Type of Incident: House Fire
 Origin: Under Investigation
 Cause: Under Investigation
 Cause of Death: Smoke Inhalation
 Smoke Detectors: No
 Fire Suppression System: No

Date of Fire: Sunday, June 5, 2022
 Time of Alarm: 0210 Hours
 Victim: W/M 24 years old
 Location: **New Castle Avenue - New Castle**
 Fire Department: Minquadales Fire Company
 Type of Incident: Injured Person
 Origin: Outside Fire - Parking Lot
 Cause: Incendiary - Open Flame
 Cause of Death: Thermal Burns
 Smoke Detectors: No
 Fire Suppression System: No



Juvenile Fire Setter Intervention Program



Rebekah L. LePore, MS
Senior Juvenile Fire Setter
Intervention Coordinator

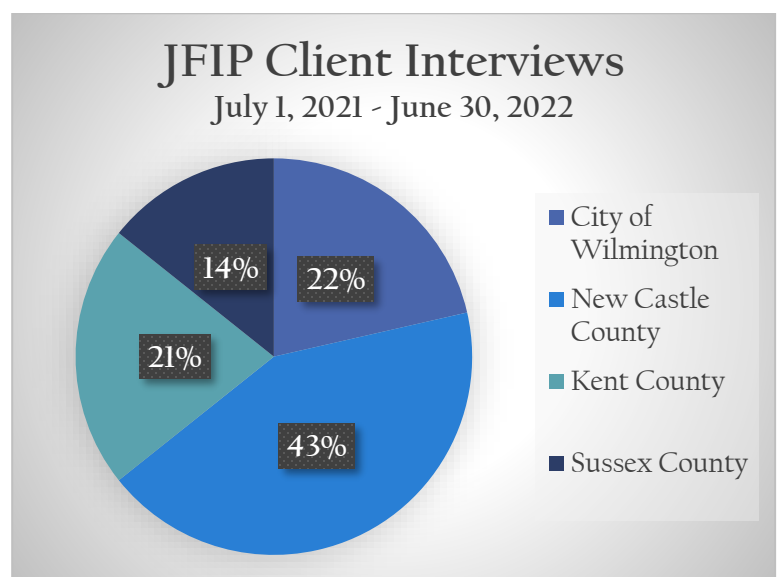
The Juvenile Fire Setter Intervention Program (JFIP) was initiated in 1981. In those **41** years, **6,143** juveniles have been interviewed and a **3% recidivism rate** has been consistently maintained. The program was temporarily suspended due to COVID-19, from March 2020 - June 2021. Since that time, referrals have been slowly coming in, with just **14** referrals in FY22. Juveniles are referred to the program through a variety of agencies including, Child Mental Health, Division of Family Services, Youth Rehabilitative Services, Schools, and Fire Departments. A majority of those referrals originated from either parents/guardians or through State or local Fire Marshal's Offices.

The JFIP represents the Office of the State Fire Marshal (OSFM) with public relations at community events. This year, the program participated in **8** events throughout the State of Delaware.

Juveniles between the ages of 3-17, may be referred to the JFIP by calling our toll free number at **1-800-432-8500** or by utilizing the referral form which can be accessed on our website <http://statefiremarshal.delaware.gov/juvenile.shtml>

Educational Intervention

- Consequences of Fire Play
- Hurting Themselves and Others
- A High Price to Pay (Legal/Financial)
- Media Influence
- Media Portrayal of Fire vs. Reality
- Good Choices vs. Bad Choices
- Peer Pressure Influence



False Fire Alarms

Effective January 1, 2004, an amendment to the Delaware Code (Title 16 §6637) introduced an initiative intended to reduce the frequency of false fire alarms in the State of Delaware. It is intended to deter excessive number of fire alarms that have been determined to be a result of poor detector maintenance or lack of required fire alarm servicing.

	<i>New Castle</i>	<i>Kent</i>	<i>Sussex</i>	<i>Statewide</i>
Total Alarm Activations (# of Warnings Issued)	82	51	66	199
Fines Issued:	4	0	0	4
Amount Collected	\$600	\$0	\$0	\$600

In FY22 there were over **199** False Fire Alarms recorded with **\$600** fines being issued.

Delaware Fire Incident Reporting System (DFIRS)

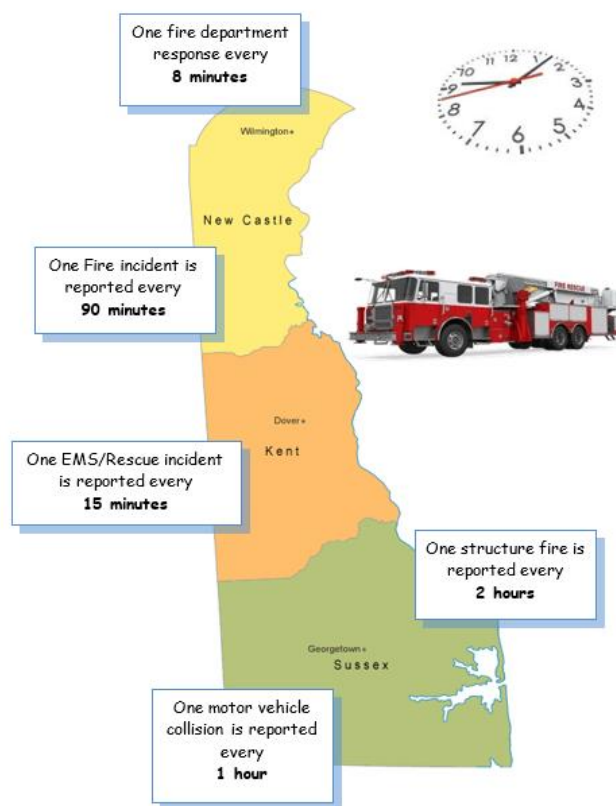
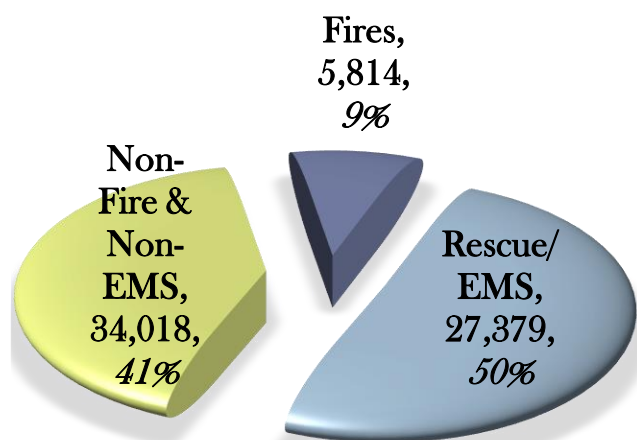
Keeping Delaware Safe – Fighting Fire with Facts

DFIRS is Delaware's segment of the Federal Emergency Management Agency's (FEMA) National Fire Incident Reporting System (NFIRS), a reporting system that captures the full range of incident activity. It constitutes the world's largest national collection of fire incident information. The Office of the State Fire Marshal oversees the consolidation and technical review of the collected data from all **61** Delaware fire departments.

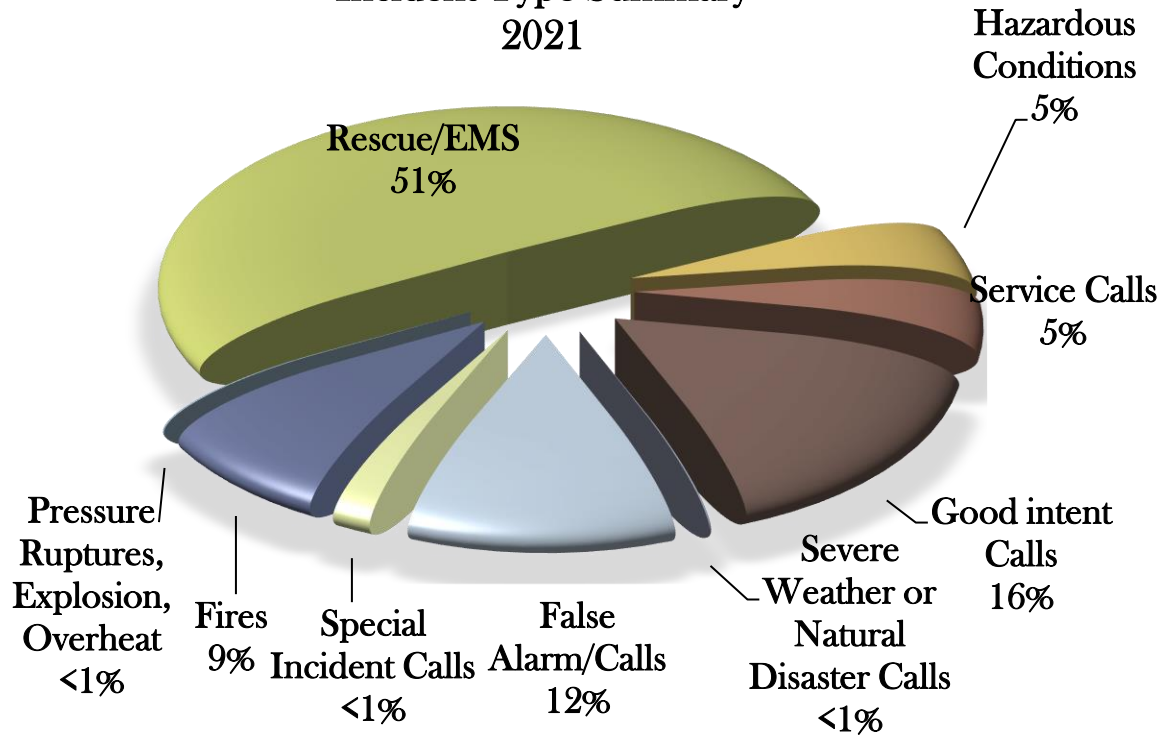
In 2021, **67,211** incidents were reported to the Office of the State Fire Marshal. There were **10,211** incidents in which a fire department provided assistance (mutual or automatic aid given) to another jurisdiction.

The makeup of the types of incidents that fire departments reported in 2021 showed an increase by **14 percent** from the previous year. The following charts provide an overview of the current characteristics in Delaware:

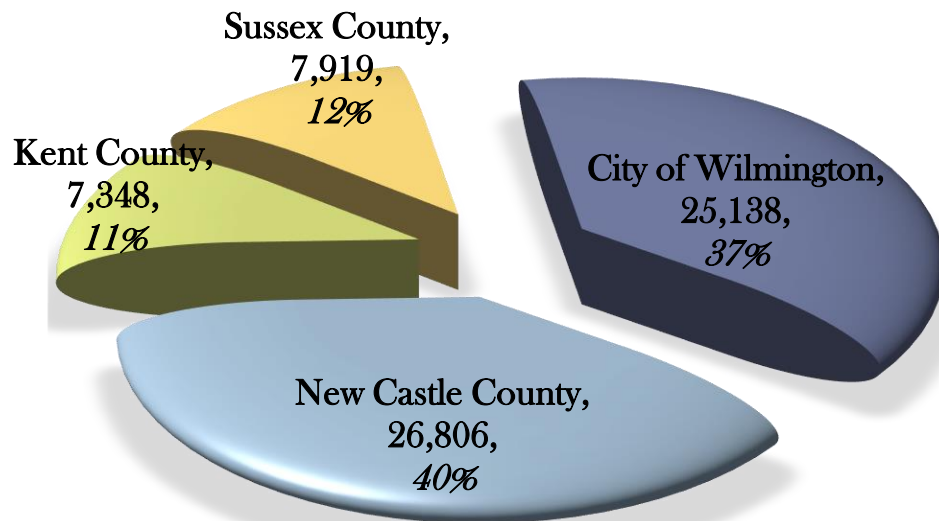
Total Incidents 2021



Incident Type Summary 2021

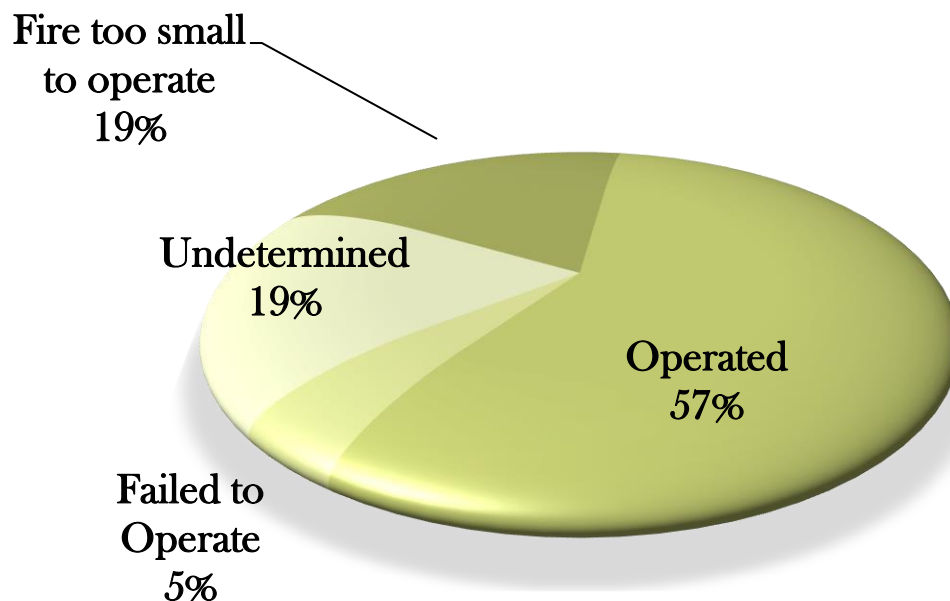


Incidents by County and City of Wilmington 2021

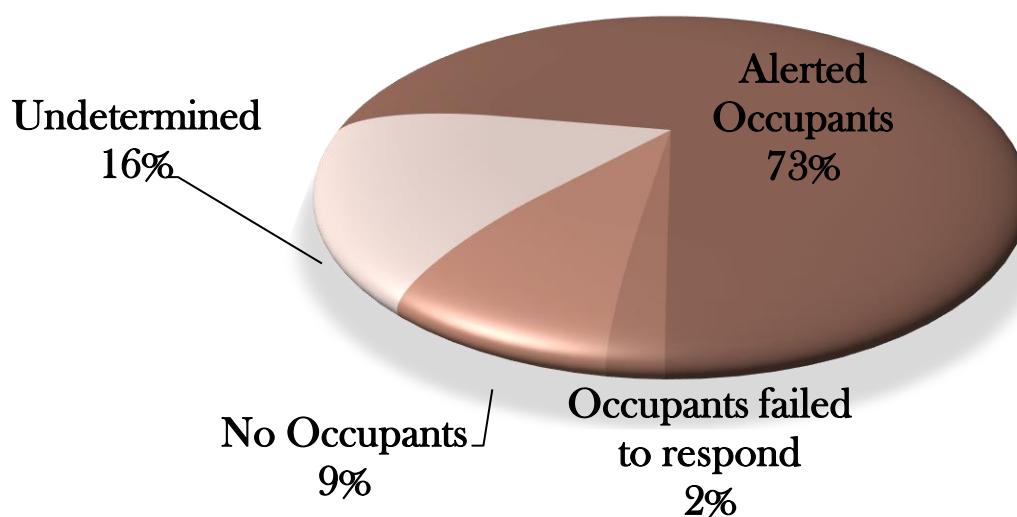


The data in these tables identify the operating principle of detectors present in the area of origin or in near proximity to the area of origin.

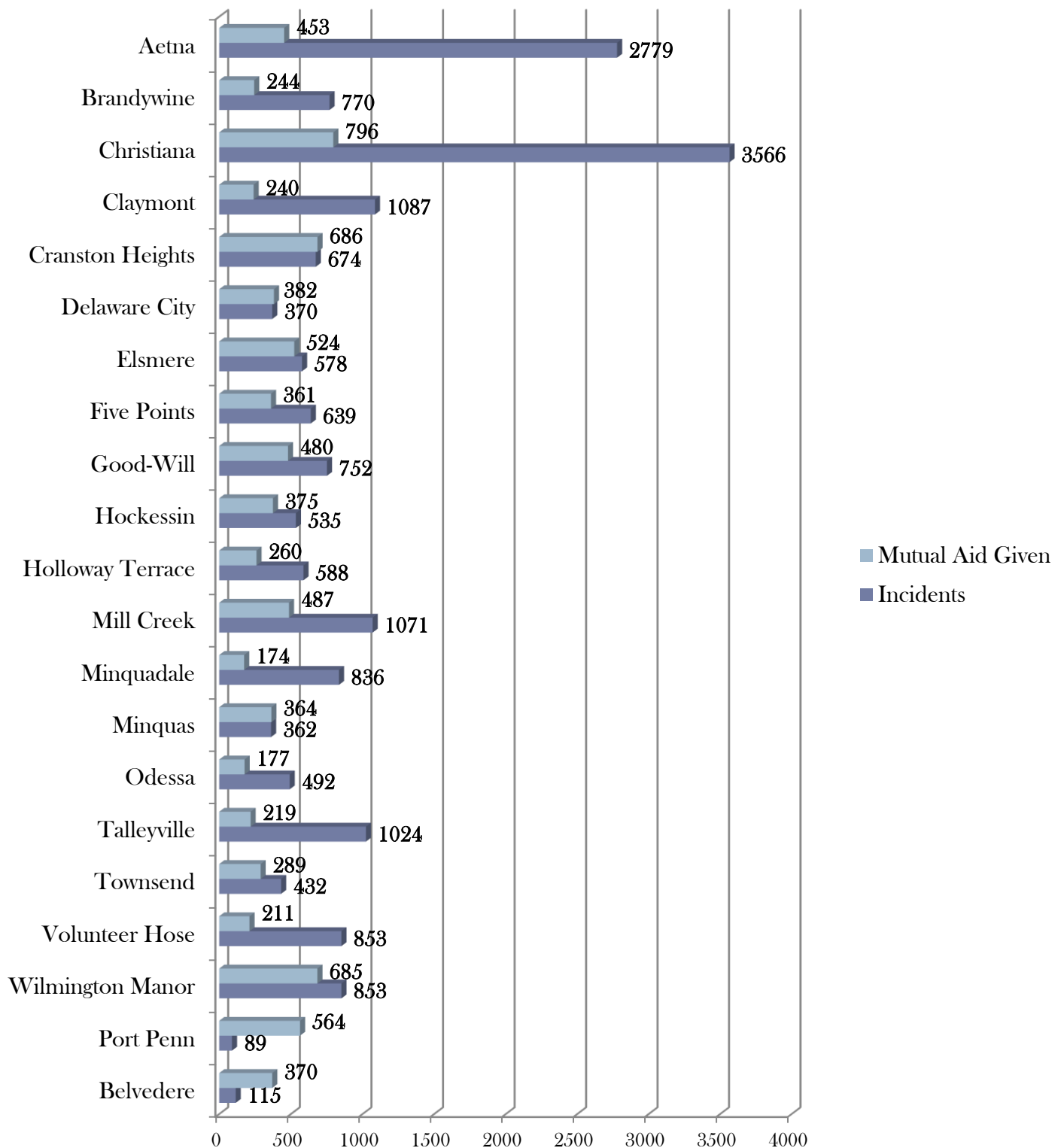
Detector Operation 2021



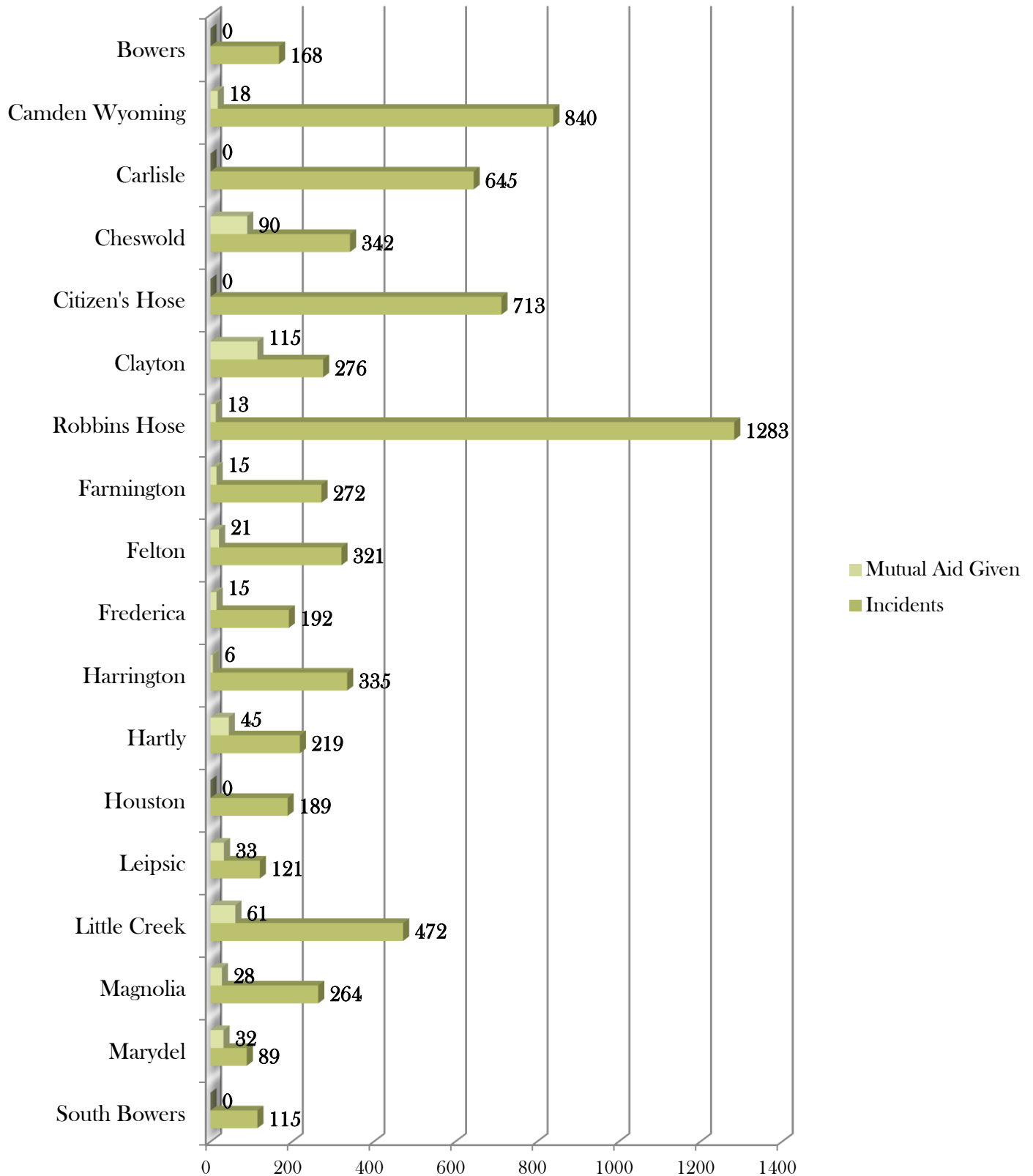
Detector Effectiveness 2021



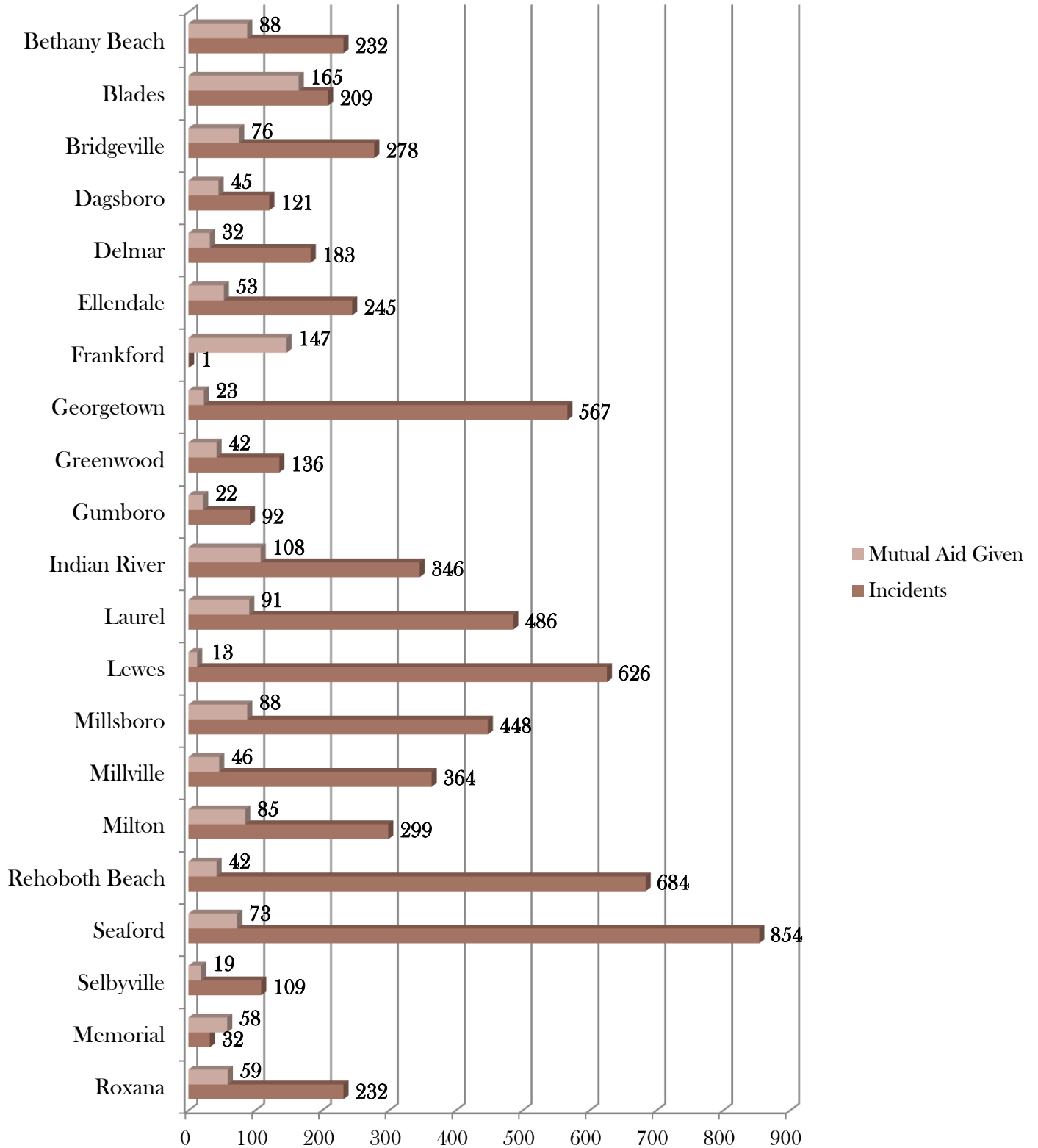
New Castle County Incidents (excluding City of Wilmington) 2021



Kent County Incidents 2021



Sussex County Incidents 2021



*Office of the
Delaware State Fire Marshal*



Headquarters Division

1537 Chestnut Grove Road
Dover, DE 19904

New Castle Division

2307 MacArthur Road
New Castle, DE 19720



Sussex Division

22705 Park Avenue
Georgetown, DE 19947

