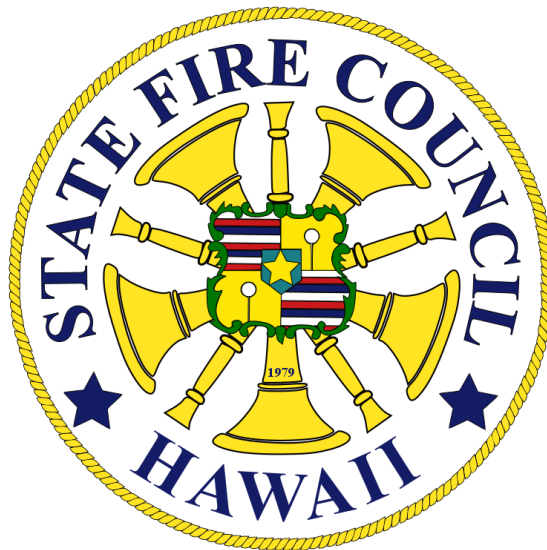


# Hawaii State Fire Council



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Three-Year Review of the Reduced Ignition Propensity Cigarette Program in Hawaii

*Submitted to*  
*The Thirty-Second Legislature*  
*January 2024*

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### **State Fire Council (SFC)**

The SFC is administratively attached to the State of Hawaii's (State) Department of Labor and Industrial Relations (DLIR) and comprised of the four county Fire Chiefs. The SFC's primary mission is to develop a comprehensive statewide fire emergency management network for the protection of life, property, and the environment.

The SFC is responsible for adopting a state fire code, applying and administering federal fire-related grants, and administering the Reduced Ignition Propensity Cigarette (RIPC) Program. The SFC advises and assists county fire departments, where appropriate, and prescribes standard procedures and forms related to inspections, investigations, and reporting of fires.

It also advises the Governor and legislature on issues relating to fire prevention, protection, fire safety, and any function or activity for which the various county fire departments are responsible.

The SFC staff consists of two Administrative Specialists, a Secretary, and an RIPC Program Specialist. The DLIR administers the appropriated funds to pay for the salaries of two administrative specialists, and the salary for the RIPC Program Specialist and a secretary is acquired from certification fees received every three years from cigarette manufacturers.

<https://labor.hawaii.gov/sfc/>

### **Purpose**

This report is being submitted to the Hawaii State Legislature pursuant to Hawaii Revised Statutes (HRS) 132C-3(e) following the conclusion of each three-year RIPC certification period. The purpose for submitting this report is two-fold—to promote fire safety, especially as it relates to smoking-related fires and its effect on the State's first responders, residents, and visitors and to update this legislative body on the accomplishments of the RIPC Program from July 1, 2020 through June 30, 2023.

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### **Regulatory History**

The concept for a cigarette that would self-extinguish surfaced in 1929 after a smoking material fire in Lowell, Massachusetts (MA). Then MA Congresswoman Edith Nourse Rogers called for the National Bureau of Standards to develop a self-extinguishing cigarette. After three years of research, the concept was brought to the cigarette manufacturers, but was never implemented. The following is a brief chronology of how the RIPC was finally enacted into law, nationally and in Hawaii:

- In 1974, Senator Phil Hart of Minnesota introduced a bill to require self-extinguishing cigarettes, but was defeated by tobacco interest groups.
- In 1979, the American Burn Association and the International Association of Fire Chiefs formed a grassroots campaign for fire-safe cigarettes.
- In that same year, MA Congressman Joe Moakley introduced a fire-safe cigarette bill to prevent future cigarette fire tragedies from occurring.
- In 1980 and 1984, Senators Alan Cranston of California and John Heinz of Pennsylvania, respectively, introduced similar bills. Concurrent Congressional efforts continued to be introduced without success until 2000.
- Campaign organizers, together with the National Fire Prevention Association (NFPA), realized that the political climate in Washington had become more hostile to cigarette regulation. So they redirected the campaign at the state level. In August 2000, New York became the first state to enact a cigarette fire safety law. Their regulatory process took three and one-half years and became effective June 28, 2004.
- MA Congressman Moakley continued to spearhead the movement until his death on May 28, 2001. Senators Richard Durbin (Illinois) and Samuel Brownback (Kansas) and Congressmen Edward Markey (MA) and Peter King (New York) reintroduced Moakley's Fire Safe Cigarette Act. Canada became the first country to require fire-safe cigarettes using the same test method when their law became effective on October 1, 2005.<sup>1</sup>

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<sup>1</sup> Coalition for Fire Safe Cigarettes (2011), *History of Fire-safe cigarettes*, NFPA, Quincy, MA

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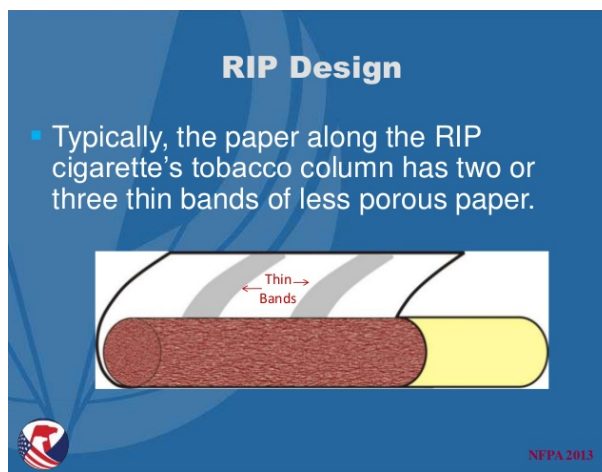
- During the ensuing years, each of the 50 states passed their own versions of an RIPC law, which was based on New York's original statute.
- The 2008 Hawaii State Legislature passed and the Governor signed Act 218 into law, and Hawaii became the 36<sup>th</sup> state to require that only RIPC be sold. By the end of 2011, RIPC laws were effective in all 50 states and the District of Columbia.

Hawaii already had programs in place to address the alarming health statistics that have been linked to cigarette smoking and smoking-related materials. However, the RIPC law helps to ensure that only fire standard compliant (FSC) cigarettes are sold in Hawaii, thereby reducing the number of fires caused by cigarettes and smoking-related materials and decreasing the number of injuries, fatalities, and property loss that occur in home-related fires.

[https://www.capitol.hawaii.gov/hrscurrent/Vol03\\_Ch0121-0200D/HRS0132C/HRS\\_0132C-.htm](https://www.capitol.hawaii.gov/hrscurrent/Vol03_Ch0121-0200D/HRS0132C/HRS_0132C-.htm)

### **RIPC Defined**

RIPC, also known as fire standard-compliant (FSC) or fire-safe cigarettes, utilizes paper with two or three thin bands of less-porous paper that acts as “speed bumps” to slow down a burning cigarette. If an RIPC is left unattended, the burning tobacco will reach one of the speed bumps and self-extinguish.



(Photo courtesy of the U.S. Consumer Product Safety Commission and the NFPA)

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Hawaii's RIPC law does not apply to cigars, roll your own cigarettes, cigarettes sold on federal property, duty-free cigarettes, and E-cigarettes.

### **Smoking Materials Fire Impact**

National estimates show that there were 7,800 residential building smoking fires in 2021. There were 275 fatalities, 750 injuries, and an estimated \$361,500,000 in dollar loss as a result of these fires. Over the 10-year period 2012-2021 these statistics represented a 13% decrease in the number of fires, a 5% decrease in the number of fatalities, and a 10% decrease in the number of injuries. However, during this time-period, there was an 8% increase in the total dollar loss from these fires taking inflation into account. <sup>2</sup>

#### [Residential Building Smoking Fire Trends \(fema.gov\)](https://www.fema.gov)

Overall, the number of fires and fire deaths in the United States has decreased dramatically since 1980. However, this fact has led to fire safety taking a back seat to other societal concerns that seem more pressing. Analysis by the NFPA Fire & Life Safety Ecosystem (FLSE) found that incorporating fire safety into the construction of buildings resulted in a reduction in the number of devastating fires in hospitals, nursing homes, schools, and hotels over the last four decades. However, while incorporating fire safety into building construction has led to a decline in the number of deaths per 1,000 reported fires in apartment buildings, there has been an increase in the number of deaths per 1,000 fires in less regulated one-and two-family homes.<sup>3</sup>

The presence of smoke alarms in residential homes has been the greatest success story to date to reduce many fires in one-and-two-family homes. This along with improvements in fire codes and standards and public education has greatly contributed to the reduction in fire fatalities and injuries resulting from these fires. Adding automatic sprinkler systems to this formula would reduce these numbers even more!<sup>4</sup>

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<sup>2</sup> U.S. Fire Administration (2021) *Residential Building Smoking Fire Trends (2012-2021)*. USFA Emmitsburg MD. Page 1.

<sup>3</sup> Ahrens (2021). *Fire Safety in the United States since 1980*. NFPA Quincy MA. Page 2.

<sup>4</sup> Ahrens (2021). Page 2.

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Successful implementation of product standards for cigarette lighters (especially for the fire deaths of young children) and the voluntary product standard for candles has helped to reduce fire risk for these types of fires overall.<sup>5</sup>

Smoking has been the leading cause of home fire deaths for most of the last four decades, showing that educating people about the fire risk associated with smoking has still not been enough to prevent these fires. The introduction of reduced ignition propensity cigarettes was intended to prevent the ignition of furniture by cigarettes. However, there is still insufficient data to confirm this fact yet. Although smoking materials related fires have become less common, when these fires have been reported in recent years, it was more likely to be deadly than those that occurred in the early 1980s.

Smoking patterns have changed considerably in the United States over the last 40 years. In 2017, only one of every six (17 percent) adults smoked combustible tobacco products, roughly half the 33 percent of adult cigarette smokers in 1980.<sup>6</sup>

According to the American Lung Association's analysis of the CDC's National Health Interview Survey, the number of cigarettes smoked per day per smoker has also steadily decreased. As of 2017, almost two-thirds of smokers smoked fewer than 15 cigarettes a day.

Finally, the percentage of households that have banned smoking indoors nearly doubled from 1992–1993 to 2010–2011, with a five-fold increase in such rules for households with at least one smoker and a six-fold increase in households with adult smokers and children under age 18. While the precise impact of these changes on smoking fires and fire deaths cannot be quantified, it is clear that the probability of a cigarette fire decreases when people smoke fewer cigarettes.<sup>7</sup>

[osNFPAEcosystemFireSafetyReport2021.pdf](#)

While Hawaii's RIPC law has helped to reduce the number of fires started by cigarettes in the State, other smoking-related materials have unfortunately been the cause of fires

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<sup>5</sup> Ahrens (2021). Page 3

<sup>6</sup> Ahrens (2021). Page 4

<sup>7</sup> Ahrens (2021). Page 34

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as well. These materials include cigars, matches, cigarette lighters, and other open flame or smoking materials.

### **Smoking and Tobacco Use Facts**

- Smoking leads to disease and disability and harms almost every organ in a human body.
- Cigarette smoking remains the leading cause of preventable disease, disability, and death in the United States.
- Annually, cigarette smoking cause more than 480,000 deaths in the United States. This is more than the total number of deaths resulting from HIV, alcohol and illegal drug use, motor vehicle injuries, and firearm-related incidents combined.
- Smoking costs the United States hundreds of billions of dollars each year (not including the costs as a result of fires annually)
- Tobacco companies continue to spend billions of dollars each year to promote their products.
- In fiscal year 2020, states collected \$27.2 billion in revenues from tobacco taxes and settlements in court. Of that, only \$740 million was allocated for use in tobacco and smoking cessation programs. This represented 2.7% of the total funds received.
- The Centers for Disease Control and Prevention (CDC) recommends that states spend at least 12% of those funds (about \$3.3 billion) on tobacco control.
- Unfortunately, none of the 50 states currently allocates the CDC's recommended total. Only three states (Alaska, California, and Maine) utilize at least 70% of the CDC recommendation. Twenty-eight states and the District of Columbia only spend 20% of the recommended CDC allotment. Connecticut has chosen NOT to utilize any state funding for prevention and smoking cessation programs at all.
- Quitting smoking is one of the most important actions that anyone can take to improve on their health regardless of their age and how long they have been smoking<sup>8</sup>
- Hawaii was one of the first states in the country to adapt a comprehensive smoke-free law prohibiting smoking in workplaces, restaurants and bars.

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<sup>8</sup> Centers for Disease Control and Prevention. (2021). *Smoking and Tobacco Use*. Atlanta GA.



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Hawaii made history when it raised the legal limit for purchasing cigarettes from 18 to 21 in a bold effort to prevent nicotine addiction and the harms of tobacco for that population.

- The Institute of Medicine projects that raising the age for tobacco sales to 21 nationwide would reduce approximately 223,000 fewer premature deaths, 50,000 fewer deaths resulting from lung cancer, and 4.2 million fewer years of life lost for those born between 2000 and 2019.<sup>9</sup>

[Health Effects of Cigarette Smoking | CDC](#)

### **Smoking-Related Fires in Hawaii**

Between July 1, 2020, and July 15, 2023, there were a total of 275 smoking-related fires. Property losses amounted to \$15,843,640, and content losses amounted to \$1,121,326 (See Table 1).

There were 4 civilian fatalities, 5 civilian injuries during this time-period. There were no fire fighter fatalities; however, 4 fire fighter injuries resulted from these fires (See Table 2).

Honolulu Fire investigators declared that a cigarette was the initial heat source for a building fire at 540 Iolani Avenue in Honolulu on September 16, 2020. This fire caused an estimated \$111,500 in damage to the property and contents of the unit. The brand/style involved was a USA Gold Menthol 100s cigarette. This was a “fire standard compliant” cigarette.

A cigarette was the initial heat source for a building fire that occurred at 1466 Pule Street in Honolulu on November 1, 2021. This fire was confined to a second floor bedroom that resulted in extensive damage to the bedroom as well as to the exterior on the house. There were no injuries but damage to the house and its contents were estimated to be \$385,000. The brand/style involved was Marlboro Blend #27 cigarette. The fire investigator was unable to determine if this was a “fire standard compliant” cigarette.

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<sup>9</sup> Centers for Disease Control and Prevention. (2021) *Extinguishing the Tobacco Epidemic in Hawaii*. (2021) Atlanta GA.

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A building fire occurred at 4280 Salt Lake Boulevard, Unit D-11 on June 20, 2022 at 1407 hours. The fire was initiated by a discarded cigarette in a rubbish receptacle. This fire was confined to the exterior patio of the unit resulting in minimal damage to the glass patio door and contents stored on the patio. The brand/style involved was Marlboro Smooth 100s cigarette. This was a “fire standard compliant” cigarette.

Damage was estimated at \$6,000 for a building fire that started on a first floor of a covered patio. This fire occurred at 1166 Palekaiko Street in Pearl City on February 12, 2023 at 1317 hours. This fire originated in a small trash bin and spread to a nearby wood fence and a contents being stored nearby. The fire was initiated by several discarded cigarette butts in a rubbish receptacle. The brand/style involved was L & M Menthol cigarette. This was a “fire standard compliant” cigarette.

Honolulu Fire investigators concluded that a cigarette was the initial heat source for a building fire at 56-505 Kamehameha Highway in Kahuku on June 26, 2023. The area of origin was an open carport. A smoldering cigarette that was discarded into a plastic bucket was determined to be the probable cause of this fire. This cigarette ignited material that was also placed in the bucket as well. Damage to the property and contents of this one-story single-family structure was estimated to be \$75,000. The brand/style involved was Benson & Hedges Menthol 100s cigarette. This was a “fire standard compliant” cigarette.

### **Hawaii RIPC Highlights, Projections, Efforts (July 1, 2020 through June 30, 2023)**

Every three years, cigarette manufacturers must submit documentation to recertify their products for sale in Hawaii. Documentation must be provided at this time verifying that their products are “fire standard compliant” cigarettes. Along with this documentation, a fee of \$375 must also be submitted for each brand/style cigarette they wish to sell in the state. Certification fees are not refundable and manufacturers can cease sales of their products in Hawaii at any time. In the last three years, only one manufacturer chose to discontinue sales of their products in Hawaii.

During the last three-year period a total of \$330,750.00 in certification fees was received. As of June 30, 2023, the RIPC Special Fund balance was just over \$496,000. This along with the estimated \$100,000 in fees that will be received in each of the next three-year period will provide sufficient funds to sustain the duties of this office.

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During this time period, 1,995 field inspections were conducted on Oahu. A total of 192 field inspections were conducted on Hawaii Island in FY23 (see Table 3). A total of 69 field inspections were conducted on Kauai. This office held off on inspections of retail stores on Maui, Moloka'i and Lana'i after the wild fires that devastated a large portion of the Lahaina on the west side of Maui. Field inspections will resume once again in early 2024. These inspections ensure that retail outlets continue to sell only FSC in Hawaii. They also serve as a great opportunity for this office to interact with store owners and associates employed by these retailers and educate them on Hawaii's RIPC Law and the benefits received from selling FSC cigarettes in our state.

As of June 30, 2023, a total of 810 brand/styles cigarettes were approved for sale in the State. Field inspections reveal that less than half of these brand/styles are actually being sold in our state.

During the timeframe of this report, 560 cigarette brand/style samples were purchased and sent for independent RIPC testing. Please note that one sample consists of three packs of that brand/style cigarette. Total RIPC Testing costs (Travel, equipment rental, cigarette purchases, postage and handling etc.) during this time period almost \$176,000 (see Table 3).

During this time period, four brand/styles cigarettes failed initial RIPC testing. An email was sent to the manufacturers for each of the four failed brand/style cigarettes noting the initial failure and each was informed that additional samples of each brand/style would be purchased and submitted for subsequent RIPC testing. Only one of the additional brand/style samples failed subsequent testing (Marlboro Menthol Gold Pack). After the second test failure, an email was sent to our contact with the Altria Group who manufactures this brand/style cigarette. An online meeting was set-up to further discuss the matter. Altria had already conducted its own testing on the brand/style that was identified prior to our meeting and had looked into possible sources for the failure. At the conclusion of this meeting, it was agreed that Altria would monitor their production machinery and conduct further research on the machine (s) that had produced these brand/styles that failed and that both parties would remain in contact throughout the process.

## **Discussion**

The NFPA Fire & Life Safety Ecosystem (FLSE) has identified eight key elements that play a critical role in fire, life, and electrical safety. These elements are:

1. Government responsibility
2. Development and use of current codes
3. Referenced standards
4. Investment in Safety
5. Skilled Workforce
6. Code Compliance
7. Preparedness and Emergency Response
8. Informed Public<sup>10</sup>

The FLSE has found that the implementation of fire safety technologies through mandated codes and standards has brought about the most successful recipe for fire safety. Their research has shown that government responsibility, development and use of current codes and an informed public has had the most obvious impact on fires since 1980.<sup>11</sup>

The biggest single factor contributing to the success of lowering the number of fires and fatalities has been the use of smoke alarms, as mandated by fire and building codes.

Other significant factors include:

- Continued public education on the significance of smoke alarms
- Child-resistant cigarette lighters
- Stricter code requirements in apartment and high-rise buildings
- Advancements in other occupancies such as hospitals, nursing homes, schools, and hotels<sup>12</sup>

Stricter code requirements have helped to reduce fatality rates per 1,000 fires in high-rise buildings from 6.0 in 1985 to 3.4 in 2014 to 2018. These stricter code requirements have helped to reduce fatality rates per 1,000 fires in apartment buildings from 7.1 fatalities per 1,000 fires in 1980 to 4.2 fatalities per 1,000 fires in 2018. And, these

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<sup>10</sup> Ahrens (2021) p 10-11.

<sup>11</sup> Ahrens (2021) p 58.

<sup>12</sup> Ahrens (2021) p 63.

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stricter code requirements have also led to lower fatality rates in fires involving hospitals, nursing homes, hotels and schools as well.

Conversely, the death rate per 1,000 fire in one-and-two-family homes increased from 7.1 fatalities per 1,000 fires in 1980 to 8.5 fatalities per 1,000 fires in 2018. Key factors to note here are that monitored alarm systems are present in many of the former occupancy types and not in one-and-two-family homes. Other positive factors to consider are compartmentation and automatic sprinkler systems.<sup>13</sup>

As mentioned previously, smoking still remains the leading cause of fire deaths in the United States for most of the last 40 years. The implementation of RIPC laws in all 50 states and Washington DC along with mandatory flammability standards for mattresses and support for voluntary upholstered furniture standards have helped to reduce the number of these fires. One key concern in this realm however has been fires involving a smoker who is also utilizing medical oxygen and health concerns relative to the flame retardants being added to upholstered furniture.<sup>14</sup>

While Hawaii as well as the other 49 states and the District of Columbia have passed RIPC laws in an effort to limit the potential of cigarettes to ignite combustibles, the effect of these laws are still relatively unknown.<sup>15</sup>

On a positive note, an informed public has taken heed to the message about second-hand smoke hazards. This has led to an increase in the number of households that have disallowed smoking indoors. This in turn, has led to a dramatic decrease in smoking fires in residences.<sup>16</sup>

This office will continue with its mission to ensure that only FSC are sold in Hawaii. While this does not eliminate in its entirety the possibility of cigarettes as the initial cause of a fire in Hawaii, it has proven to be a valuable reducer in that fact.

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<sup>13</sup> Ahrens (2021) p 58.

<sup>14</sup> Ahrens (2021) p 60.

<sup>15</sup> Ahrens (2021) p 60.

<sup>16</sup> Ahrens (2021) p 62.

### **State Fire Council Sprinkler Advocacy**

The State Fire Council (SFC) has been a steadfast advocate for the installation of automatic fire sprinklers systems in residential high-rise structures, town homes, and one- and two-family dwelling for many years. This position is consistent with recommendations and empirically based, peer-reviewed scientific research from international and U.S. national fire service organizations.

However, Act 53, 2017 Legislative Session, extended the prohibition of the adoption of any codes or regulations by the counties that require the installation of residential fire sprinklers in one- and two-family dwellings. Act 53 passed the Legislature despite robust evidence that such fire sprinkler systems save lives; reduce injury, property damage, and environmental harm; and have little or no detrimental impact on construction of town homes and one- and two-family dwellings. A review of testimony submitted in support of Act 53 exposed general conjecture that mandatory provisions for the installation of fire sprinkler systems in new town homes and one- and two-family dwellings will substantially raise the cost of construction for these structures.

According to the publication *Fire Safety in the United States since 1980* from the National Fire Protection Association (2021), sprinklers not only reduce fatalities by 86 percent — compared to smoke alarms, which decrease risk of death by half — they also cut down on property damages by 70 percent. There's also environmental benefit: Sprinklers flow water typically at 20 to 25 gallons per minute as soon as they're heat-activated, decreasing structural damage, harmful fumes and danger to firefighters when they arrive. On the other hand, a fire hose flows at about 150 gallons per minute after the fire has had time to grow, which in itself releases more noxious fumes and hydrocarbon emissions.

Out of 101 deaths in single-family and townhouse fires between 1992 and 2007 in Prince George's County, MD, where fire sprinklers are required in new construction, not one occurred in a dwelling equipped with a sprinkler system, according to a study by Home Fire Sprinkler Initiative. Homes with a fire sprinkler also accounted for less than 2 percent of people injured in a fire. In the 245 sprinkler activations during the 15-year study, Prince George's Fire Department estimated approximately \$1.3 million in fire damages, versus a potential loss of over \$42 million with no sprinkler system.

There were no relative declines in the issuance of single-family construction permits in either Prince George's County in 1992 when sprinkler requirements were imposed on

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detached homes, or in Montgomery County when detached homes were covered in 2004. In fact, in both instances, the issuance of single-family construction permits surged, in absolute terms and relative to neighboring counties. Although it is unlikely that the sprinkler ordinances actually stimulated construction activity, there is absolutely no indication from the permit data that the fire sprinkler requirements negatively impacted single-family housing construction.

Recent research conducted by the SFC in collaboration with plumbing and fire sprinkler contractors produced estimates \$8,000 - \$12,000 for sprinkler system installation in a new 1,600 square foot single-family residence.

The SFC will continue to introduce legislation and supporting testimony to repeal Act 53.

### **Conclusion**

A Journal of Fire Sciences out of Lund University in Swedish conducted a study of 144 fatal residential fires that occurred between 2011 and 2014. Of this total, 38 involved smoking-related materials. One key population identified in this study was smokers receiving home care. Results of this study showed that flame-resistant bedclothes could have been effective for 50% of this population involved. Flame-resistant clothing could have been effective for 31% of smokers receiving home care as would a thermally activated suppression system (e.g. sprinklers). A detector-activated (smoke) suppression system (based on water mist) could potentially save 88% of smokers receiving home care, but only 14% would be saved by a home smoke alarm alone. In the short term, the authors recommend flame-resistant bedding and clothing assist this population. For the long term, the inclusion of detector-activated suppression systems would have the greatest positive effect for smokers receiving home care.<sup>17</sup>

Most of the common causes of fire are related to human actions or lack thereof. The FLSE stresses continued public education alerting people to the potential dangers of fire and how to prevent them as a primary solution to address this challenge. Public education in Hawaii has led to a dramatic reduction in the number of fire deaths involving children under the age of five. This office believes a key factor for this has

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<sup>17</sup> Journal of Fire Sciences (2016). *How could the fire fatalities have been prevented? An analysis of 144 cases during 2011 -2014 in Sweden.* 2016. Vol. 34(6) 515-527. Division of Fire Safety Engineering. Lund University. Sweden

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been and continues to be the distribution of Hawaii's Firefighter Safety Guides which is now in its 38th year of publication including its first edition published in both English and Hawaiian!.

<https://fire.honolulu.gov/fire-and-life-safety/keiki/fire-fighters-safety-guide/>

On the other hand, FLSE research shows that this is not the same for our elder population. In 1980, children under five and those 65 or older each accounted for almost one-fifth of all home fire deaths. The percentage for elderly almost doubled in 2018, while the percentage for pre-school aged fire deaths was only one-third as high. The elder population of Hawaii's whole community still needs to be better educated in and included in factors that will better protect this population from the hazards of fires occurring in homes.

### **Recommendations**

1. Support the installation of smoke alarms and residential sprinklers. If a fire occurs, properly installed and maintained smoke alarms provide an early warning signal to alert occupants of a fire condition. Residential sprinkler systems however help to reduce the risk of deaths, injuries, and property damage. They activate 24 hours a day, seven days a week without human intervention or action to control or extinguish a fire.
2. Support a change to the RIPC Statute to allow portions of the RIPC Special Fund to be utilized to support the enhancement of and continuance of fire safety guides as they head into their 38<sup>th</sup> year of publication. Stories on and feedback from Hawaii's children have proven that the lessons learned from these guides have enabled our youth to make better preparations to prevent fires in the home and to better react when a fire does start in their place of residence.
3. Support a change to the RIPC Statute to allocate funds for programs geared to fire safety education and protection efforts for our senior community in Hawaii. They are an essential part of Hawaii's whole community and deserve to be included in education in fire safety just as much as the rest of Hawaii's resident and visitor populations do.



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**Bibliography**

Ahrens, Marty (2019), *Home Fires Started by Smoking*, NFPA, Quincy, MA, Retrieved on June 21, 2023 from <https://www.nfpa.org/News-and-Research/Data-research-and-tools/US-Fire-Problem/Smoking-Materials>

Ahrens, Marty & Messerschmidt, Brigitte (2021), *Fire Safety in the United States since 1980*, NFPA, Quincy, MA. Retrieved on July 6, 2023 from: [osNFPAEcosystemFireSafetyReport2021.ashx](https://www.nfpa.org/News-and-Research/Data-research-and-tools/US-Fire-Problem/Smoking-Materials)

Centers for Disease Control and Prevention (CDC) (2021). *Smoking and Tobacco Use*. Atlanta GA. Retrieved on July 5, 2023 from [Data and Statistics | Smoking and Tobacco Use | CDC](https://www.cdc.gov/tobacco/data_statistics/trends/2019-2020/)

Centers for Disease Control and Prevention (2021) *Extinguishing the Tobacco Epidemic in Hawaii*. Retrieved on July 2, 2023 from [cdc\\_113019\\_DS1.pdf](https://www.cdc.gov/tobacco). [www.cdc.gov/tobacco](https://www.cdc.gov/tobacco)

Coalition for Fire Safe Cigarettes (2011), *History of Fire-Safe Cigarettes*, NFPA, Quincy, MA. Retrieved on July 5, 2023 from <http://www.nfpa.org/safety-information/for-consumers/causes/smoking/coalition-for-fire-safe-cigarettes/history>

Journal of Fire Sciences (2016). *How could the fire fatalities have been prevented? An analysis of 144 cases during 2011-2014 in Sweden*. Vol. 34(6) 515-527. Division of Fire Safety Engineering, Lund University. Sweden.

U.S. Fire Administration (2021) *Residential Building Smoking Fire Trends (2012-2021)*. USFA Emmitsburg MD. Retrieved on July 6, 2023 from [Residential Building Smoking Fire Trends \(fema.gov\)](https://www.fema.gov)

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**Table 1. Hawaii Smoking-Related Heat Source Statistics-Frequency and Losses (July 1, 2020 through June 30, 2023)**

Description	Frequency	\$ Property Losses	\$ Content Losses
Heat from other open flame or smoking materials	109	8,903,538	555,605
Cigarettes	42	1,187,350	47,950
Pipe or cigar	2	14,000	41,000
Heat from undetermined smoking material	19	274,000	16,300
Match	8	1,600	2,500
Cigarette lighter	53	3,514,702	291,451
Candle	42	1,948,450	166,520
Totals	275	15,843,640	1,121,326

**Table 2. Hawaii Smoking-Related Heat Source Statistics-Deaths and Injuries (July 1, 2020 through June 30, 2023)**

Description	Civilian Deaths	Civilian Injuries	FF Deaths	FF Injuries
Heat from other open flame or smoking materials	2	0	0	3
Cigarettes	1	0	0	0
Pipe or cigar	0	0	0	0
Heat from undetermined smoking material	0	0	0	0
Match	0	0	0	0
Cigarette lighter	1	1	0	1
Candle	0	4	0	0
Totals	4	5	0	4

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**Table 3. RIPC Fiscal Year Highlights (July 1, 2020 through June 30, 2023)**

<b>Description</b>	<b>FY2021 (to May 31, 2021)</b>	<b>FY2022 (to June 30, 2022)</b>	<b>FY2023 (to June 30, 2023)</b>
Beginning RIPC Special Fund Balance	\$703,280	\$749,154	\$606,883
Plus Fees-Interest Collected	\$255,288	\$37,230	\$56,502
RIPC Specialist & Secretary Salaries	\$43,351	\$59,672	\$41,589
Office-Dues-Subscription Expenses	\$853	\$279	\$66
Postage	\$196	\$76	\$409
Advertising-Uniforms	0	0	\$1,246
Honolulu/Outer Islands/Mainland Travel Costs	\$192	0	\$5,080
Equipment Rental	\$1,688	\$2,110	\$2,629
Misc.	\$3,205	\$5,044	\$5,015
Services on Fee C & C	\$150,000	\$150,000	\$150,000
Cigarette Samples Purchased for Testing	160	200	200
Cigarette Purchasing, Shipping and Testing Costs	\$42,840	\$90,328	\$31,000
Oahu Inspections/Outreach	661	632	702
Outer Island Inspections	0	0	261
Closing RIPC Special Fund Balance	\$749,154	\$606,883	\$427,351
Ending C&C Balance	\$63,809	\$0	\$149,135
Total RIPC Funds	\$812,963	\$606,883	\$576,486

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**Table 4. Hawaii Fire-Related Deaths and Injuries (July 1, 2020 through June 30, 2023)**

<b>Description</b>	<b>Frequency</b>	<b>Civilian Deaths</b>	<b>Civilian Injuries</b>	<b>FF Deaths</b>	<b>FF Injuries</b>
Other	6	4	2	0	1
Exposed to Fire Products	26	4	22	0	0
Exposed to Hazardous Materials or Toxic Fumes	3	0	3	0	0
Struck by or Contact With an Object	1	0	1	0	0
Multiple Causes	1	1	0	0	0
Undetermined	2	2		0	0
<b>Totals</b>	<b>39</b>	<b>11</b>	<b>28</b>	<b>0</b>	<b>1</b>