



# Residential Fire Sprinklers

John Steinbeck, Fire Chief



**togetherforbetter**

# Residential Fire Sprinklers

## Facts:

- In 2018, NFPA reported 2,360 deaths related to structure fires and 7,800 injuries.
- CCFD responded on 14 fire related deaths in a private dwelling since 2020.
- There have been **zero** reported private dwelling deaths in Clark County where residential sprinklers were present and working properly.
- Residential fire sprinklers are mandatory in the cities of Las Vegas and Henderson.



togetherforbetter

# Residential Fire Sprinklers

- Adoption of a Residential Sprinkler Ordinance is a High Priority.
- CCFD worked with the Southern Nevada Homebuilder's Association (SNHBA) for over a year and a half to address their concerns. Discussions included:
  - CCFD
  - Building Department
  - Comprehensive Planning
  - Public Works
  - County Management



togetherforbetter

# Residential Fire Sprinklers

- The Fire Department retained the services of an independent contractor to complete a cost benefit analysis in accordance with NRS 278.586.
- The conclusion of the contractor reaffirmed, “... there continues to be a definite cost benefit to both homeowners and home builders by installing fire suppression systems in all new residential homes up to 5,000 square feet of livable space throughout all of Clark County.”



togetherforbetter

# Residential Fire Sprinklers

## Proposed Ordinance Timeline:

- Public Notice sent out June 5, 2023.
- Public Comment Period – one set of comments received from SNHBA.
- Introduction of Ordinance and Business Impact Statement
  - BCC agenda – August 15, 2023
- Public Hearing and Approval of Ordinance
  - BCC agenda – September 5, 2023
- Effective Date of Ordinance
  - March 5, 2024



togetherforbetter

# Residential Fire Sprinklers

## SNHBA Concerns:

- Not all costs were outlined in the cost benefit analysis (13D).
- The report details life safety benefits in the cost benefit analysis.
- The cost benefit analysis asserts that there will not be an adverse effect associated with homebuilding if residential sprinklers are mandated.
- The report uses appreciation as a benefit to the homeowner.



togetherforbetter

# Residential Fire Sprinklers

- Summary included in Business Impact Statement:
  - **Adverse Effects** – Modest increase in initial construction costs of some new homes due to residential sprinklers.
  - **Beneficial Effects** – Addition of residential fire sprinklers to every new home will increase the overall safety of the community and greatly reduce the likelihood of house fire fatalities.
  - **Direct Effects** – Increased safety for residents of sprinklered homes and a reduced risk to first responders when responding to a fire in these homes.
  - **Indirect Effects** – Possible reduction in home insurance premiums and increased value and equity in newly constructed homes.



togetherforbetter

# Residential Fire Sprinklers

## Additional Benefits of Residential Fire Sprinklers:

- Increased immediate safety to firefighters.
- Decreased exposure of carcinogens and toxic fumes to firefighters and residents.
- Decreased pollution from smoke and greenhouse gasses (97.8%).
- Decreased pollution from water runoff (71%).
- Decrease in the overall amount of water needed to extinguish the fire (91%).
- Decrease in the number of pets killed due to fire.



togetherforbetter



# Residential Fire Sprinklers

## CCFD Agreed to SNHBA requests:

- Exemption from the new sprinkler requirements for projects with an approved tentative map within 180 days from the passage of the ordinance.
- Provide next-day sprinkler inspections for residential sprinklers.
- Work with Building Department to incorporate residential sprinkler plan reviews into the standard plan process.



togetherforbetter

# Residential Fire Sprinklers

- Include language in the ordinance which eliminates the need for an Alternate Means report every time there are ceiling heights greater than 24’.
- Include language in the ordinance that provides an acceptable alternative to the 10-psi safety factor.
- Include changes to the mitigation matrix to only require NFPA 13D sprinkler systems.



togetherforbetter

# Residential Fire Sprinklers

- Include language in the ordinance to extend the length of RTC turnarounds to 600 feet from 500 feet.
- Provide residential fire statistical data reporting to SNHBA.
- Fees will be in accordance with the existing adopted fee schedule.



togetherforbetter

# Residential Fire Sprinklers

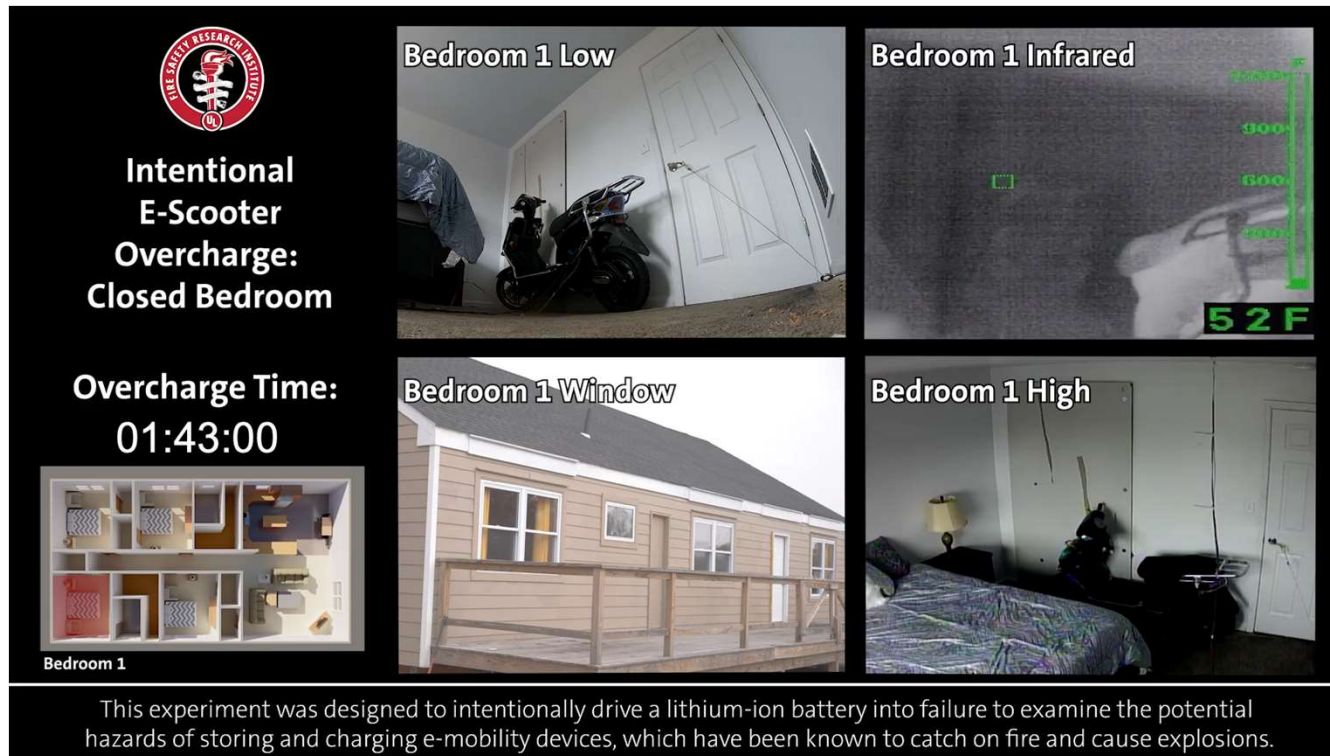
## Additional Items:


- The Fire Code currently allows for increased hydrant spacing for sprinklered homes.
- The current code allows for homebuilders to use 3/4" water meters depending upon proving the hydraulic demand.
- The Building Department agreed to the elimination of drywall nail inspections under certain conditions.
- CCFD did not agree to requests for narrower street widths.




togetherforbetter

# Residential Fire Sprinklers



  
**Intentional  
E-Scooter  
Overcharge:  
Closed Bedroom**

**Overcharge Time:  
01:43:00**

  
Bedroom 1

**Bedroom 1 Low**

**Bedroom 1 Infrared**

**Bedroom 1 Window**

**Bedroom 1 High**

52 F

This experiment was designed to intentionally drive a lithium-ion battery into failure to examine the potential hazards of storing and charging e-mobility devices, which have been known to catch on fire and cause explosions.



togetherforbetter

# Residential Fire Sprinklers

## In Summary:

- Allowances to help offset additional cost were provided.
- Effective date for the ordinance was extended for 6 months to allow homebuilders to adjust pricing.
- Sprinklers **save lives** and it's time to require them in homes where most fatal building fires occur.



togetherforbetter

# Questions/Comments



**togetherforbetter**