



Fire Investigation and Research Unit

Community Safety Directorate

NSW Fire Brigades

Superintendent Chris Lewis



- Intro into the Fire Investigation and Research Unit and what we do
 - Human behaviour, building behaviour, fire behaviour
 - Case study methodology to test supporting quantitative methodology
 - Early research into the house fires





- The research problem, what we think is happening
 - Residential fires have a higher heat release rate than previously and can lead to quicker flashover than before due to various factors



- Justification for research, if its true what does it mean
 - Decreased escape times for occupants
 - Increased risk to firefighters,
 - ramifications into training and
 - strategic planning for fire station locations.



- Methodology, what we did to test the hypothesis
 - Stage One (completed)
 - ❖ Joint project with CSIRO
 - ❖ Survey of firefighters
 - ❖ Literature review
- Objective of the research
 - To identify changes in the domestic environment over the last three decades that may affect life safety outcomes for residents and firefighters exposed to residential fires.



- Stage Two (Commencing October)
 - Definition of typical fire loads and types of the 1970's and now.
 - Conduct four room burns to map fire initiation and growth.
 - Measure heat release rates and exhaust gases.



- Finding, results of Stage One.
 - Literature Review
 - Statistical Analysis
 - Survey of FireFighters



- Conclusion,
where to from
here
 - Further action
research



A blue-tinted photograph of a vast ocean under a cloudy sky. The water is a deep blue with gentle ripples, and the sky is a lighter blue with wispy white clouds. The horizon line is visible in the distance.

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