Automatic Sprinkler Fire Protection
Research Council

Fire Protection Research Foundation
September 22, 2008
Council Mission and Membership

- **Mission** - To enhance the design and installation of fire sprinkler systems through research and education in support of NFPA 13
- **Reporting Structure** - A subdivision of the Fire Protection Research Foundation
- **Membership** - The Council is open to all individuals who support its mission; liaison with Foundation Board and NFPA staff and NFPA 13 Technical Committees. Chair and vice chair elected by the Council.
Council Activities

- Plan, oversee and communicate research in support of its mission
- Research agenda development
- Resource for project sponsors, technical panel members
- Symposia planning
- Yearly meetings; regular email communications
Automatic Sprinkler Research at the Foundation

- Compact Shelf Storage Protection
- Solid Shelf Storage Protection
- HVLS Fans and Sprinkler Interaction
- Home Fire Sprinkler Cost Assessments

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- Foam – Water Sprinkler Storage Protection
- Sprinkler Vent Curtain Interaction
- ESFR Sprinkler Protection
Topics?

- Short term – issues that will likely arise in the next cycle
- Longer term – design basis
- Longer term/strategic – changes in storage configurations and contents, environmental restrictions on water/foams
Council Recommendations
- Special Subjects

- Seismic Performance Of Pipe Drops In Sprinkler Systems - 3
- High Rise water supply and Fire Pump Reliability – time sensitive (NIST recommendations) -1
- Impact Of NFPA 25 Enforcement - reference the Australian experience -1
- Antifreeze Impact on Density (NEW -Huggins)
- Ceiling Pockets (NEW – Huggins)
- Seismic requirements for 5% drift limits in rack storage – NEW Thacker - 3
Council Recommendations – General Storage - 5

- Storage Occupancies with Standard Spray Sprinklers /Validate Existing Class III and Class IV Storage Curves for large K-factor sprinklers - 3
- Expanded Group A Plastic in Rack Storage - 13
- Storage Under Sloped Ceilings - 9
- Storage Fire Protection and Final Extinguishment (NEW – Zurich NA) – 13E, FF tactics, mop up training, impact on storage design, consider vents - 11
- Pallets – geometries, woods – FM is doing it now – NEW – Golinveaux - 2
- Burning characteristics of commodities – related to protection/full scale performance, classification – include pallet issues, geometry effects – NEW Golinveaux - 7
Council Recommendations - Special Applications

- Indoor Boat Storage Protection Requirements Phase II - 1
- Indoor RV storage
- Indoor Storage of PODs - 2
- Protection Of Oxidizers
- Active Fire Protection In Tunnels
- Utilization of Pre-action ESFR Systems For Cold Storage Occupancies
- Sidewall Sprinklers For Balconies - NFSA doing some work now
- Ceiling pockets - 1
- Sprinklers for small commercial bldg – risk assessment, special requirements, 13S- 3
- Lightweight construction – sprinkler impact on safety – NEW Golinveaux - 1
- Performance of Dry Pipe Systems for Common Light/Ordinary Hazard Type Sprinkler Scenarios
Council Recommendations
- Residential - 6

- Single Sprinkler - field and lab studies, performance objectives, test methods, note ceiling geometry, hazard assessment /Water Meter Effects on Residential Flow - education on the water issue together with AWWA/Fire Flow Design Calculations and Fire Protection Requirements - 21

- Costs – study thresholds – NEW Franson

- Municipal water usage – sprinkler actuation vs fire department response
Council Recommendations
- Design/Modeling - 1

- Sprinkler Performance Reliability – start with literature review /Sprinkler - 3Performance and Trade-Offs (NEW - SP) - 1
- Sprinkler/Smoke Management Interface - 2
- Technical Basis for Integrating Fire Suppression and Risk/Hazard