STATE OF WASHINGTON

DEPARTMENT OF ENTERPRISE SERVICES

1500 Jefferson, Olympia, WA 98504

Washington State Building Code Council

Improving the built environment by promoting health, safety and welfare

MINUTES
RESIDENTIAL CODE TECHNICAL ADVISORY GROUP

DATE: May 31, 2012
LOCATION: Shoreline Fire Station

TAG MEMBERS PRESENT: Ray Allshouse, Annie O'Rourke, Mark Miller (phone) Jeff Peterson, Tom Phillips, Joe Herr, John Gentry, Rick Lupton, Willy Hill, Dan Johnson

TAG MEMBERS ABSENT:

SBCC STAFF: Tim Nogler, Joanne McCaughan, Peggy Bryden

VISITORS: John Eliason, Tony To, Steve McGlochlin, Gary Allsup, Ron Schumacher, Zak Parker, Ericka McNeill, Jeff LaFlam, Crosby Grindle, Bryan Hampson, Jeff Hudson, Suzanne Mayr, Todd Bullock, Todd Short, Jan Rohila, Crystal Whiters, Greg Rogers, Kraig Stevenson, Don McDonald, Martha Rose, Randy Miller, Tony Shapiro, Don Koidahl, Brian Holtzclaw, Richard Ferry, Randall Black, Jan Himebaugh, Gordon Ballantyne, Kurt Wilson, Angela White, Jeanette McKague, Cliff Burdick.

CALL TO ORDER & WELCOME

Ray Allshouse, TAG Chair called the meeting to order and introductions were made.

REVIEW AND APPROVE AGENDA

The agenda was approved as written.

AMENDMENT PROPOSAL 12-014, RESIDENTIAL FIRE SPRINKLERS

Presentation by Greg Rogers, Washington Fire Sprinkler Coalition, Proponent of the amendment.

Greg Rogers thanked the chair and members of the TAG for the opportunity to speak with the TAG and answer questions on this important issue. The Sprinkler Coalition sent a letter to the members of the TAG covering most of the items to be discussed prior to the meeting.

One of the items we want to highlight is the provisions for fire sprinklers is in all the national model codes and this requirement has spanned two international code cycles with the last hearing taking place in May 2010.

The second highlight is the alternative design method and changes in technology that have occurred over the last several years. These alternatives have changed the way residential sprinkler systems can be done and they also are easy to install with cost benefits to the homeowner and builder. Over the last several years Washington State sprinkler contractor licensing requirements have also gone through changes to allow plumbers to install systems.

The third item is the use of a tank pump system with residential sprinklers. These types of systems can be used in areas without public water access and in areas with high water connection fees.

Suzanne Mayr, from Northwest Burn Foundation, read a statement from Amber Fowler of the same foundation. Amber Fowler is the executive director of the Northwest Burn Foundation based in Seattle, Washington.

"On behalf of the constituencies we serve the NW Burn Foundation supports the adoption of an ordinance requiring the instillation of fire sprinklers in residential occupancies. For those of you unfamiliar with our organization, the NW Burn Foundation is a well regarded 501(c)3 nonprofit organization that has been serving burn injury survivors and their families in Oregon, Washington, Idaho, Montana and Alaska for more than 30 years. Our mission is to prevent burns and to improve the quality of life for burn survivors through programs, education and research.

"Fires in the home continue to pose one of the biggest threats to the citizenry of the five states that our organization serves. We know that over 350,000 home fires occur every year in this country and that more than 2,500 people die in those home fires. We also know that home fire sprinklers are a proven way to protect lives and property against fires at home. However, sprinklers do more than protect our personal property. They help save the lives of some of the most vulnerable populations served by the NW Burn Foundation; youth, adults age 55 and over, and people with disabilities. When a fire ignites in a residential occupancy the time to escape may be only a few minutes before the conditions inside a home become untenable and life threatening. Imagine how quickly the average person must respond to threat of fire. Now imagine the terrifying impact and general confusion thrust upon high risk groups including our youth, adults aged 55 and over and people with disabilities.

Regarding young children ages 0 to 4 years: small children have little control of their environment, less perception of danger, and even less ability to escape (a burning situation) on

their own. Children who live in crowded (conditions), and in families with low socioeconomic status, are also at risk. Other risk factors may include a lack of safe play environments, insufficient supervision and/or young or otherwise unprepared caretakers. Here are just three of the many examples of the youth served by the NW Burn Foundation since 2008.

"On June 2, 2011 a two month old male child received burns to 20 percent of his body due to injuries sustained in a house fire. On January 2, 2009 a four year old male child sustained inhalation injuries in a house fire. His sibling died as a result of this fire. On September 2, 2008 a two year old male child, received burns to 6.5 percent of his body due to injury sustained in a house fire.

"Regarding adults aged 55 and over: the mobility of adults aged 55 and over may be decreased due to certain medical conditions or medications. They may also have certain physical conditions that make them more prone to falls and thus limit their general mobility and ability to respond quickly to life threatening circumstances. Mobility impairments may include physical: such as using a wheelchair, walker or cane, slow or awkward movements, muscle weakness or fatigue or slower reflexes which increase the risk of personal injury and/or death. Sensory impairments can result in decreased sensation, especially to the hands and feet and can negatively impact a person's ability to recognize danger. Here are three examples of adults over 55 served by the NW Burn Foundation since 2008.

"On February 5, 2012 a 71 year old female received burns to 55 percent of her body due to injuries sustained in a house fire. On August 24, 2011 an 87 year old female received burns to her body due to injuries sustained in a house fire. On July 3, 2008 a 56 year old female received burns to 12 percent of her body due to injuries sustained in a house fire.

"Regarding people with disabilities or special needs: individuals who may have physical, mental or emotional challenges or require some type of assistance from caregivers are at high risk for all types of burn injuries. The disability may be permanent or temporary due to illness or injury and varies in severity from minor to total dependency on others. Changes in a person's intellect, perception, memory, judgment or awareness may hinder the person's ability to recognize a dangerous situation or respond appropriately to remove themselves from danger.

"In conclusion, residential fire sprinklers are life saving systems that respond quickly and effectively to the presence of a nearby fire. Just as there is no other safety technology or program that produces as great a reduction in property loss per fire as sprinklers, there also is no other safety technology or program that produces a great a reduction in personal injury or death as sprinklers in our homes."

Thank you for the opportunity to be a part of today's discussion.

Bryan Hampson, City of Kenmore Building Official; Land Development/Permitting Director. He is here today to explain why the city of Kenmore adopted the residential appendix as an ordinance around June 2010; they went through a nine month adoption process. When he

started with the City of Kenmore we were in the middle of doing code adoption processes so I wanted to figure out if it was something I wanted to pursue. In his opinion the role of a building official is to protect the public by ensuring its buildings are safe not only for the visitors, but for the fire department personnel and the fire emergency responders. The 2009 Residential Code has three core aspects which are construction methods, fire alarms/smoke detectors and the third is the sprinklers. The process of reviewing this was to sit down with the water purveyor, Al Nelson, and the fire marshal, Jeff LeFlam, to determine the concerns. The first concerns were the seven barriers identified by the State Building Code Council. They also met with the Master Builders Association which identified three additional barriers. After the second meeting we formed a stakeholders group throughout the city of Kenmore which included the Master Builders Association, BIAW, fire department personnel, water department, builders in the area, fire sprinkler designers and contractors and city personnel. They were able to identify people's concerns and how they would be dealt with. In his opinion, the biggest barrier was cost, which really would be pretty minimal. They had a consensus from the group that it would range from $1.25-2.00/sq. foot. Another barrier was the lack of education. So they created an information packet for the homeowners. Another barrier was the lack of preferred design and installation details and guidelines. They identified standards appropriate for the City of Kenmore. The cost and cost recovery of a voluntary residential fire sprinkler was another concern. The costs recovery system will have the fire department reduce their annual benefit service charge 50 percent for sprinklered homes. That is an average of $200 per house in taxes. The insurance premiums would also be reduced 8-13% throughout Kenmore. Another barrier was the costs for permits and inspections. Our local fire department has very minimum costs for permits and inspections. It ranges from $160-240. Another barrier was additional costs of water hook-up fees and stand-by fees. The water purveyor for Kenmore doesn't have a separate meter for this and they don't have a stand-by fee for the larger meter. They go off the flow that is used.

Al Nelson, operations director for North Shore Utility District. We serve five cities within our service area boundary, including Evergreen Hospital. The district doesn't charge an increased amount if it is for fire sprinkler systems. Most water utilities will charge an extra fee. If there is a ¾ inch hook-up the general facility charge is to buy into the existing infrastructure based on flow capacity. If the meter was being put in the purpose of fire sprinklers they wouldn't get the increased charge. We already start off with a large meter as the base meter and in most cases that is sufficient to supply the fire sprinkler systems. If the meter does need to be upsized they accommodate that for a nominal fee of $55. We've have been working quite a while with our local agencies to keep costs down on these systems.

Bryan Hampson said it is important to point out that it is not the actual cost of the system that is expensive it could be the requirements imposed by other fire or utility districts. There was a question regarding shut-off and Al Nelson checked with his legal personnel and there isn't a liability for the utility to shut-off the meter, e.g., for non-payment, when a home is sprinklered.

Bryan repeated that fire safety has improved dramatically without fire sprinklers, but emphasized it improves exponentially with sprinklers installed. The unpredictability of the

sprinkler systems is not the system, but the other fees imposed by the utility districts that are unpredictable. Maintenance creates an issue for homeowners, but it is not any different than any other plumbing system. Based on these results, I wanted to bring this forward to propose a local ordinance and received a favorable vote for this. Although this has been in effect for a short time we have seen more than double the increase in permits for these.

Randy Miller, Camas Fire Marshal's Office; has been working with fire sprinkler installation issues since 1997. He believes he brings a unique perspective and has installed over 1,000 systems in Camas. He sent a letter to the TAG on May 22 and would like to review some of the highlights of the letter.

Camas has had one of the most successful sprinkler programs in the state of Washington because of the stakeholders getting together and working through the barriers. We've been living and experiencing the success of this for over a decade. Larger meters do not require more flow. The water purveyor recognizes there could be less flow if there is a fire in the home. They have worked with very well with the City. The building department has also worked with us and they are supportive of our efforts. They hold the line for inspections for us and they don't allow cover. It allows the fire marshal's office to come in for quality control and they have cooperated with us from the beginning.

Other barriers that we have overcome are related to fees. The City Council waived the fire impact fee which is .20 cents/sq. ft. They believe in the systems so builders and homeowners get to reinvest that money back into the system. Camas waives the permits fees. Camas requires two permits and inspections, but the fees have been waived because we believe in the systems and we want to make them more cost effective. The fire marshal's office reduced installation costs by not requiring drawings or calculations. This is a bit unconventional, but the installers can e-mail or fax their application with minimal information and we can hold them accountable to install the system correctly on inspection. It requires the fire marshal to have higher quality control on their inspections, but it allows installers to decrease their costs to the builders and the owners.

The planning department has been very supportive. We have developed codes that have been beneficial to developers and builders that allow them to have design advantages in their land utilization. That is, land that would not be usable, or has difficult terrain, or there is difficulty finding two ways in, they can allow one single access point when sprinklers are present. We have several subdivisions where they have saved literally many lots where they haven't had to put in infrastructure for the secondary access; that reduced project costs. In Camas we allow only flow-through systems so it is tied off to the most remote toilet and therefore it is a potable water system. It eliminates the need for a double check valve, which also decreases the cost. So the builder then makes sure there is a toilet connection at the most remote location that they can tie into the sprinkler system and that's how our systems are done; 99 percent of our systems are that way. The last thing the builder has to do before a rough in bucket test is to have tenting in place which is extra freeze protection over the pipe. So there are three minor areas builders have to adjust.

Installers must also be held to a higher standard, by educating the builders and being involved in the process to facilitate any issues and have them step up to the plate to be a part of the process. Some of the flexibility of cost savings that developers and builders can take advantage of are: steeper access roads, gated communities, fewer hydrants which decreases infrastructure costs, single access points and the narrower streets allow a higher lot yield or higher density.

After polling the contractors, Camas is seeing costs of $.90-1.00/ sq. ft. Competitiveness, efficiencies, the fire impact fee that is waived has kept the market in Camas very strong. He had over 100 permit applications over the last year and it has been that way for several years. We also have a wide range of homes. We have starter homes from 1,200 sq. ft. to those that are in the 10,000 to 12,000 sq. ft. range. They all have sprinklers in them and they are all selling. They all go through the process. Most installations are one to two days. They work alongside other contractors or subcontractors. It doesn't delay the builders' process. He has seen a change in the public's attitude and the builder's attitude from ten years ago. I have a home with sprinklers and my folks have a home with sprinklers and even if the smoke detectors do work there are issues with getting out of the building. I know that my parents won't have to deal with that because the fire will be controlled in the beginning stage.

We have had two structure fires in Camas both controlled by the single activation of a low flow 13 gallon per minute head. It is dramatically different for me to go and investigate a fire in a home that was put out by the fire department. These two homes didn't look like there was a fire in them when we drove up. The single head had put the fire out and we turned the valve off that was the end of story. They have to deal with their insurance company on some water damage, but they don't have to deal with the devastation of a fire. The room and contents fire can destroy the rest of the house and never have any fire impingement. The devastating effects of the heat and thermal layers that drop throughout the rest of the house is amazing. It destroys personal effects, heirlooms and family histories. I have stood with families that have been out of their homes for well over a year. This is an amazing technology. This is not theory, this is actual experience. There is no other product or system that would be required in residential construction today if decades of data supporting its dramatic effectiveness to save lives and property were available like has been provided for residential fire sprinklers. In the short history of Camas we have had those two saves.

It is time to move forward. It is time to make a difference in our future, in the future of our environmental resources. It is time that every home has the advantages of life saving residential fire sprinklers. The barrier and obstacles of providing everyone buying a home with all the advantages of life saving sprinkler systems are in reality fairly easy to overcome and we have proven that in Camas. We proved it before people made a barrier list. We should provide these systems the same way we provide wind shear and earthquake protection to all of our home buyers.

TAG member comment. I applaud that you have gone through the process of making it easier for the builder to do this. The problem with the code that a lot people have opposition to is not every city has your enlightenment. They will adopt the sprinklers and give nothing in return. That is a big problem from a builders' standpoint. There are jurisdictions that have already done that. Randy Miller responds that fire marshals have to be brought along in this process. That is what the coalition is working on. I ensure that it is done correctly. We treat them like electrical contractors. This decreases their cost. We are trying to educate other fire marshals. I've been doing it for 12 years and trying to get others on board. There will be a shift in attitude of fire marshals as I have seen in some of the builders.

A TAG member asks a question. Did you see a greater risk with new housing than you do with existing housing? Randy said some of the most dramatic fires have been in new housing. As we have been preaching for decades the systems and processes do make a difference in not starting fires, but people fill them with combustibles and human behavior is what starts fires whether you are in a new home or a shanty. We had a high profile person have a room and contents fire started by their son and they were out of their house for over a year and it was very devastating. Did you explore the option of requiring sprinklers across the board? What about retrofits? Would the cost would be prohibitive? Not on a single story home, the cost would be minimal if you could get into the attic. I have had some retrofits.

One more question. If the water gets turned off for lack of payment how do you deal with that? Randy said at the bottom of all the water bills there is a statement about the risk for not paying your water bill and the water would be turned off to your lifesaving sprinklers. So we have a warning about that. If you don't pay for your water then that is your issue. We have put this warning on the statement and then they receive a notice that it has been turned off. That's a fairly rare issue.

Annie O'Rourke, a TAG member, asked if this mandate is applied to manufactured housing. Randy said manufactured housing is not allowed in the city. Annie asked whether the entire city is served by private water districts. Randy said it is the City of Camas; there are a couple of dozen houses where the system is tank and pump where water service was not available. It increased the cost by $1,200-1,500 per system. Other than that there were no other hurdles to overcome.

Tom Phillips, a TAG member, asked about licenses. There is a license for a designer. There is still the sprinkler license, but it is called a residential sprinkler and that allows a plumbing contractor to apply for that license. It is not as detailed as a commercial license so you wouldn't have to go through the same test or meet the same criteria as a commercial sprinkler installer. Residential sprinkler installer guidelines are based upon that requirement. Randy implied that you are not always getting calculations with the plan. Randy agreed he does not require any drawings or require any calculations. I do require contractor submittal form. They tell me the spacing they have designed to. They provide the size meter they need and they provide the cut sheets on the heads they are using. Then when I do the inspection I can ensure they have installed them correctly and when I do the rough-in bucket test I can make sure we

get the flow that meets the design criteria for their heads. Typically we are seeing 13 gallons a minute needed for two heads so 26 gallons for a bucket test. Tom asked if they are using NFPA 13D and are they seeing any that are using the prescriptive requirements? Randy said he doesn't think so. We require them to do a flow-through system. There can be no valve to shut off the system unless it shuts off the potable and the sprinkler system. He doesn't allow a double check system with the valves. Tom asked do you see a time when plumbers can install it and if they are installed for the IRC can it just be like a plumbing inspection? Based upon what we are seeing across the state in regard to the P2904 which is in the plumbing code, from that perspective, I see it moving in that direction. P2904 is one of those other design alternatives. Basically what it says is if you have 30 pounds pressure out in the street you can bring a ¾ inch line and feed a ½ inch line to a sprinkler head. That is almost the same thing that Randy is doing because he is able to say I need a ½ inch line and a ¾ inch line here. The calculations are already done with the table. All one needs to see is if the pipe size is there. Another example is our building inspector is going out and he is actually doing the tenting inspection at the same time they are doing the insulation inspection. It saves time and effort. It is a combination system.

Ray Allshouse opened the meeting up for public comment. He indicated the TAG wants to hear only new information only and asked that speakers not repeat what has already been said.

Martha Rose. Thank you for allowing me to speak. This is my 40th year in construction. I am the second vice president for the Master Builders and I represent my company and the Seattle Council of the Master Builders. I am in favor of sprinklers in a wide variety of circumstances. I have built buildings that are fully sprinkled so I am quite familiar with annual inspections by the fire department and back-flow prevention tests. The feeling that I get from this conversation is there are some great applications where fire sprinklers make a lot of sense. It should be left voluntary, as an alternative when designing and platting properties or houses just as it is now, where if you want to put that extra house on that development that is too far away you can sprinkler it.

I think when people tell stories of fire deaths I don't really know if they are being honest about what the age of the homes are that people are dying in. I think that if we look honestly at new home construction and the resulting deaths from fires in new homes I guess we would find the death rate is close to zero. The older homes are the highest risk and those are the ones we should be focused on if we are trying to save lives. We all know that every new home has somewhere between 4 to 8 smoke detectors that have battery back-ups. We know that smoke kills more people than fire and now we have added the layer of CO sensor requirements. The fact we are better insulating our homes now presents fewer pathways for fire to take off including the new code provision that allows for a solidly filled cavity for an attic. The other thing is about cost effectiveness of fire sprinklers, I feel they are not acknowledging many of the hidden costs. I just wrote down some which includes the permits, the sales tax, the interest the builder has to pay on the loan to put the thing in, there is the higher sale price for the house, the higher real estate commission that goes with that, the higher excise tax, the higher annual property tax with the higher sales price on the house, there is the annual backflow test, also

there is the cost of PVC which has doubled since Katrina. So whatever the cost is we know it is on an upward trajectory.

Tony Shapiro/Architect. He is opposed to mandating fire sprinklers throughout single family residences. We have a desire in this society to remove risk from life. If we remove all risk it is going to hamstring our ability to live free and productive lives, but mandating the additional costs that sprinklers will impose upon the average homeowner will be very economically damaging to our society. We are at a tipping point with the regulations we already have are now impacting us and the construction industry seems to be impacted a lot. The Energy Code which we are familiar with in this state is the most stringent in the nation. We have added insulation and cost impacts from that. The NEC in 2009 mandated that arc-fault breakers be used throughout the house. These breakers are $65 each if not more and old breakers used to be $5 each. This is $600 for ten breakers. This is building up to the point where we are going to be unable to build houses because people can't afford to buy them. Older construction is more impacted by fire than newer construction is. In closing I would urge the Council to mandate smoke alarms throughout older construction where more benefit could be achieved for a more reasonable cost.

Don Koidahl with MDA Construction/Fire department volunteer in Lewis County for 20 years. He is in opposition to this code and would like us to think outside the box. This is a fire department driven issue. The International Building Code hearings were held in Pennsylvania and some 3,000 fire fighters went to press this issue of fire sprinklers to make it mandatory for everybody in the country. That means there is a huge entity against the poor guy who has a dream to build a house to get out of the city. We are being so over regulated with the growth management act requiring 5-20 acres to build a house. You have the energy code with the blower door tests where you can't have any air leakage in your house, but you have to put an air exchanger to change the air every 24 hours. I mean you defeat that purpose. Sometimes we can be over-regulated. I lost a client this week. He wanted to build a house in Centralia and they have a deal there where they require fire sprinklers. He is 800 feet from a fire hydrant and a mile and a half on a road to his house from the fire department. He wanted to build a shop and a house. They want him to sprinkle both. I asked a plumber what does it cost for a 2,000 sq. ft house to sprinkle. Roughly $8,000, but that's a smaller issue. If you don't have 1,000 gallon/minute water then you have to have ground storage. So you have a pump system for that. All of these costs just keep adding and adding up. We are preventing the little guy from building a 1,700 to 2,000 sq. ft. house because they have to sprinkle. It is beyond reason. I'm for the little guy. I'm not totally against fire sprinklers, but one size doesn't fit all. When you have multi-family homes I would certainly want my neighbor to be sprinkled or myself because I don't know what is going on next door.

Brian Holtzclaw is in-house counsel for KLN Construction, based in Edmonds. He is in opposition to the proposal and supports the comments heard previously in opposition. My background is as a land use lawyer so I deal in the world of nexus and the nexus between the regulation and the problem trying to be solved. What I don't see here is the nexus between mandating sprinklers in new construction and the problem that is trying to be solved. The

information I've seen supports that fire deaths have been declining over the decades and homes are safer than they ever have been. The added cost only adds an incremental amount of additional safety for people buying houses. In regard to the cost, it is a double edged sword for a builder. On the one hand there is no demand for more buyers for sprinkler systems than for houses. In the three years we've been building houses we haven't had a single customer indicate they want a sprinkler system built in their house. So if it was mandated to be put in, they would not be expecting to pay a price for it they would be expecting us to cover that cost. Buyers don't see a value in it. There is no ability to raise prices right now to offset that cost so either way we lose. To me this issue is not whether houses should be sprinklered. It is whether the state should be mandating across the board, across the state, that every newly constructed single family house should be sprinklered.

Some of the most compelling testimony you've heard against this came from the representatives of Camas and from Kenmore this morning. We can agree to disagree on the variation and the cost. The one thing where there can be agreement and you heard from the North Shore Water District, there is no uniformity amongst the water districts for what their regulations are to sprinkler a house. Whether it is the size of the meter, or whether there is going to be a second meter required. In terms of what was said in Camas I can't speak to that either, but in a voluntary program there is an incentive for these jurisdictions to work with the builders to figure out ways where sprinklers can be provided on a cost effective basis. There may be ways through reducing road widths that the fire marshals can agree to or illuminating second access points that can save money that offsets the incremental cost of providing the fire sprinklers. You take that away by providing a mandate the discussions that occurred through the stakeholders in Camas and Kenmore are not going to occur because the local jurisdictions no longer have any incentive to work with this. They work with the builder and say we've got a mandate. We've been told you've got to have sprinklers so put a sprinkler in your house; then we bear the cost. To me it shouldn't be whether houses should be sprinklered it is whether or not you are mandating local jurisdictions to mandate us to sprinkler the house. That is a decision that should be made by each jurisdiction where they can weigh the cost benefits and determine what trade-offs they are going to be willing to accept, and take into consideration the cost at each local level.

Question by TAG member. If similar trade-offs were in place ahead of time, how would you feel about the state mandate? Brian said in his perspective for him personally, the main objective is the uncertainty and the added cost the industry would bear to provide this incremental benefit. If it was cost neutral, I think you would find builders supportive of it. However, under a mandate you are not going to get to a point where it would be cost neutral. You won't get those discussions on what the acceptable trade-offs are. You're not going to get the discussions on whether or not the builder can save money with building a narrower road if the fire marshal is in agreement that if the houses are sprinkled we don't need that additional right of way and additional pavement put in. I don't see how you can come up with a rule that takes into account all those trade-offs that inherently are going to occur at the local level.

Richard Ferry/Quadrant Homes. On behalf of Quadrant, I urge the Council to retain the option for voluntary not mandatory residential sprinklers. For those of you not familiar with Quadrant Homes we've been building homes in the Puget Sound area for more than 40 years and we seek to provide high quality affordable homes to homebuyers in this region. While the significant cost with mandating sprinklers is a concern to us today I wish to speak about two other critical issues, encouraging cost effective proven fire safety and advocating for homebuyer education in choice. Preventing death and injury from fire is an issue the home building industry takes seriously. We comply with the significant building and development codes adopted by the state and local jurisdictions today to ensure fire safety. As a result fire safety is built into the very fabric of the communities that we provide. Fire protection measures are taken now; it is not just a long list but includes highly effective actions that have dramatically reduced fire deaths and injuries in new home construction. The currently used actions are proven. Deaths in residences have steadily fallen for the last 30 years. Smoke alarms, fire-rated building materials, streets that accommodate fire equipment are all cost effective proven methods that protect homeowners. In summary, we support cost effective and proven measures currently in the code for new home construction and we urge the Council to decline mandatory residential fire sprinklers in the code and continue to allow homeowners and jurisdictions to choose as they wish to made additional enhanced investments like fire sprinklers.

Randall Black/Washington Water Utilities Council; representing over 150 utilities throughout the state. The Utilities Council has taken up this issue and wanted to share its concerns with the SBCC. The Utilities Council is in favor of the current rule that allows for the jurisdictions to meet with the water utilities to determine whether residential fire sprinklers should be mandatory or not. The Utilities Council has over 4,100 systems throughout the state. Of those there are 2,322 systems that are investor-owned, non-profit, non-WUTC that serve a population of 300,000. These systems are struggling. They struggle for current water rights. They struggle with undersized systems that do not always meet adequate pressures and flow. These systems range anywhere from 15 connections to 180,000 connections; the bigger systems do not have these issues. These issues particularly lie with the smaller systems that are privately-owned and privately-invested. There are concerns with closed systems versus flow systems. Flow-through systems are preferred options by utilities and favored by many jurisdictions. However closed systems are a way for non-utilities who struggle with water pressures and flows to meet those requirements when they are required to install residential fire sprinkler systems. These systems do have issues with regard to water quality and also require back-flow protection on those systems. The other issues that surround this require certified testers for these back-flow systems and they are required when a back-flow system is obtained on a closed system. General facilities charges are a concern for utilities and they vary from utility to utility. They have various nuances that attribute to those general facility charge, system development charge based on utility history either purchasing wholesale water or because they are under conservation measures because of unavailable additional water supply. They have punitive charges that they use in order to incentivize people to reduce their water consumption. Their charges are related on a case by case basis. Finally in closing as we talked about at the last Council meeting we are recommending that SBCC continue to work the rule

that we have currently in place where utilities are working with the jurisdictional authority to decide residential fire sprinkler systems.

TAG member question. To clarify what you said, in many of the small water districts where there may be poor water pressure, you'd be more likely to requesting a closed system? Randall responded some of these systems do require this because of the low water pressure, correct. Another question. You do prefer the flow-through. Randall answered yes. Let me give you an example. I worked on Senator Simpson's bill when he first proposed this study for barriers against residential fire sprinkler systems and the biggest issue for the utilities back then was the liability issue surrounding either maintenance or operations or construction or for non-payment. There was a real concern of liability of turning off sprinkler systems at that time. Since then a lot of utilities were going to a two-meter system. They were going to a meter for domestic system and a meter for fire system; this would ensure that utilities which adopt the fire system would stay in operation and just turn off the domestic water for non-payment. Now that that liability has been taken away what we have done is adopting the flow-through system with the county and city and our board of commissioners also adopted to reduce that fire system cost under the GFC charge because that liability change has occurred.

TAG member comment. Some utilities don't even allow the flow-through and require the closed with the back-flow preventers. It also bothers me the cost that some of these districts are charging for having a sprinkler system and requiring a separate meter. It is frustrating because some of these costs are $20,000-30,000 or more. It seems that the priorities are in the wrong place. It seems the water districts need to come together and be part of the solution. Randall said there was a group that is coming together to see how these issues can be resolved on a case by case basis. There are those cases that charge $20,000 GFC charge in saying they are reducing our availability for future water for our customers so we want to make sure we have a way to recover our costs because the wholesale market is the only way we are going to be able to get water. State water rights are no longer available. It is a very tight issue when utilities go to the Dept. of Ecology to look for ground water rights or surface water rights. They are encumbered by all kinds of requirements. There is also the Safe Water Drinking Act which is now requiring even greater testing and regulation for water quality that utilities are faced with. All these costs are rolled up into what the charges are by utilities.

Question by TAG member, Jeff Peterson. He grew up on Whidbey Island and there are water issues up there where the community well serves maybe 100 homeowners. To actually be able to install a sprinkler system it sounds like we'd have to have flow preventer because we have to have the pressure in the house. It is going to be under 35 psi especially in summer time when the well gets way down there. For offering incentives I can see some larger jurisdictions being able to do that. Are there any state programs that would be able to offer incentives to these really small water districts that are basically trying to provide a homeowners' association with water? Randall noted homeowners' associations are small systems, 50 connections or fewer, and the state requires they have a certified operator. To have a certified operator they have to be able to put their license on the record that they will operate that system to the code and standards of the State Dept. of Health. Frequently that means new apparatuses, new products

have to go in to meet standards; there are costs involved. So homeowners are reluctant to pay, and the operator is then caught in a spot between the two issues; his obligation for water quality and standards as well as the people that are paying for his services. This is causing the state and the counties to have to take over these systems because they are not operating adequately. Water quality is the issue here because the system is not being kept up or operated at the levels they are supposed to be.

Jan Himebaugh/BIAW. We've heard a lot from the fire proponents. Kenmore and Camas have done a very good job working with the community and interest groups in developing codes and cycles and things to make it easier for people to implement residential fire sprinklers. Every community is different. It is very hard for the state to make a mandate that you must provide fire sprinklers. That would result in outcry everywhere. The legislature in 2008 did direct the SBCC to develop a report on barriers to voluntary residential fire sprinklers. We keep forgetting that little word in all of this legislative and these barriers to entry. It is all voluntary. It was only supposed to remove barriers to voluntary fire sprinklers and then be able to allow local jurisdictions to adopt, if they wanted to, mandatory sprinklers.

In the first bill in 2008, HB2575, they stated the legislature does not intend to establish an actual or implied mandate for the installation of private residential fire sprinklers. The legislature has told you they did not want this report that was created in 2008 to parlay into mandatory fire sprinklers statewide. In 2008 this report did come up with 7 barriers to entry and there were 13 action items. The legislature responded with HB1295 which was supposed to address the barriers. They addressed 3 of the 13 action items in the report. While that is a good step and we are all for making it easier for people to have the option to put in fire sprinklers, 3 of 13 is not nearly good enough to start mandating sprinklers statewide.

The discount for homeowners' insurance is all well and good. Homeowners do have the option to put in fire sprinklers and get that discount. However, there is a safety cap at which the more you add on is not going to increase your discount. Once you reach the cap adding more safety features to the home does not increase your homeowners' discount. Another concern is local jurisdiction insurance rating classifications that if they don't mandate fire sprinklers they will automatically be moved to a lower classification. She spoke with the Washington Survey and Ratings Bureau last week and that is not exactly how it works. It is a five percent "ding" on their classification rating that doesn't necessarily mean they will fall to a lower classification. Other factors are taken into consideration. If they are doing all the other things correctly, five percent will not drop them down. This has been in place since July, 2011 and has had a relatively small impact on local jurisdictions. Local jurisdictions still have the option to adopt mandated fire sprinklers in their jurisdiction. The access to water is an issue for private and public water purveyors as well as folks on wells because they do have to have an extra pump and a generator. That does add significant amount of cost. She hears there is no maintenance on sprinklers but common sense makes that hard to believe.

TAG Member question. I challenge some of the numbers you have said. You said a 700 gallon tank. The system is usually designed to blow two heads, 13 gallons or 26 gallons for 10

minutes. That's 260 gallons. Jan said it has to be pressurized so 260 gallons needs a bigger tank for the pressurization of a well system. TAG member said he had a number of well-based systems installed in his city and none of them had a 700 gallon tank and they worked quite well. He doesn't know of any requirement in his jurisdiction that requires a standby generator. Jan responded so you are counting on your well to pump water when the power is out. TAG member asked are you aware of the self contained pressurized systems that work like a fire extinguisher. They use nitrogen. It is a stand-alone system. It is a cost but there is more than one way to do this.

Gordon Ballantyne/Partner: Polygon Northwest. We are large local builder; currently involved with 17 jobs in nine different jurisdictions. Some have sprinklers and some don't. As far as potable water systems go we have had those recently declined in the city of Tumwater, Pierce County, Snohomish County and Covington. The only one where we work that has approved of the potable water system is the City of Kent. There are a few more pieces involved in the system that doesn't involve tying up the back of a toilet within that jurisdiction. Bucket tests, drain-Ts have to be installed as well as some licensing issues of sprinkler fitters versus plumbers. Plumbers have to do the potable water tie-ins, versus sprinkler fitters so you end up with a scheduling conflict between the two mechanical sub-trades. Also, your costs don't really consider the added schedule time of the sprinkler fitters. Another new issue that hasn't been brought up is where to find all of the sprinkler fitters to do this work. It you are looking to put this together in 18 months there doesn't seem to be enough time to put together the number of people who will need to be licensed. There was also a large sprinkler-head recall that went through the industry at various commercial buildings and apartment complexes. How would a regular homeowner be able to deal with that?

Kurt Wilson/Soundbuilt Homes: Pierce, Thurston, King and Snohomish counties. This is a difficult issue that comes up a lot on an individual basis for him and also a statewide discussion. In this political arena we get into discussions of the cost and the reasons why you are in favor of or opposed to sprinklers. Back to the gentleman who spoke about the nexus; let's identify the problem and then the solutions that are available. The real issue is with the existing housing stock. Nobody has been able to provide statistics that are documented for post Growth Management Act (GMA). Where has a death occurred, that a life could have been saved, as a result of not having fire sprinklers in a post GMA constructed house? We are not focusing on the discussion which is regulating new construction and the standards we are applying to them. When you bulk everything together are you are taking into account existing housing stock? His experience has been dealing with the different fire departments on a number of issues; it all comes down to response times. Response times are what fire departments use as a meter for how they are able to accommodate the citizens in their jurisdiction. We discuss life-safety. These fire sprinklers are not designed to put out fires. They are designed to suppress fires. That fire suppression buys time for the fire department to get there. We need to identify what we are going to gain. We can keep adding regulations, but we have to deal with the people in the houses; people who smoke in bed or have candles near curtains. As builders we are being targeted with fees and other costs that keep going up and we need to take a look at the cost/benefit analysis and the nexus between the requirement and the benefit that is being

gained by that additional cost. On a study done by the National Homebuilders Association less than 15 percent of those polled are willing to pay for fire sprinklers. So if you look at response time or life-safety issues relative to what people desire or expect, there is a very low expectation that a fire sprinkler is going do something that benefits them. Response time seems to be the issue and that comes down to fire station placement and incentives for connectivity of new roads and infrastructure that is being built. Let's just focus on things that we can quantify that are beneficial and tie a reasonable cost to it. Regulating people's behavior is a tough thing to do.

TAG member comment. A comment to corroborate what was said by Kurt Wilson. One of the things I have found interesting going through some of this information we received is when they refer to occupied homes it always includes multi-unit in parentheses. His question is where they are separating out one and two family homes versus multi-unit. Kurt added that when death statistics are quoted it is very difficult, as builders are seen as looking out for their own interests, and not the interests of those who will occupy the homes. In his experience, that is not true. He has had a number of fire marshals and building officials who say it could go either way. They don't have good information regarding injuries or deaths from post-GMA homes.

Angela White/Olympia Master Builders. This organization covers five counties in Washington: Thurston, Mason, Lewis, Pacific and Grays Harbor counties. She agrees with pretty much everything that has been said. As an association they are not against fire sprinklers, but are against mandating fire sprinklers in single family residences. We feel that fire sprinkler installation companies have every opportunity to market their product to the public just like any member of our association markets their product to the public and work on educating the public about their product and to spread the word and this gives the public the choice if they build a new home they can choose to install fire sprinklers when they are building their home.

Jeanette McKague/Washington Realtors, Olympia. We represent both sides of the issue. We agree with keeping the sprinklers as voluntary and letting local communities decide whether to require or not require sprinklers. You have heard enough testimony about the different issues with rural areas, suburban areas, wells and those issues. Infrastructure, even in urban areas, is a huge issue in terms of maintenance and the cost of upgrading pipes that may be 75 to 100 years old in the older communities. She thinks there are a lot of issues that have already been heard about the sprinklers, and believes the SBCC made a good decision in 2008-2009 to keep them voluntary. The one thing we have requested in our testimony last time was that SBCC continue to work on the different barriers identified in the report that was done, and address the statistics issue, the education issue. Many of the organizations heard from today are willing to get together and address these issues. We want safe communities for our clients. SBCC does have an option here to poll different organizations and look at the barriers and determine the solutions.

Cliff Burdick/Building Official, Wenatchee. The City of Wenatchee in consultation with our Fire Marshal is requesting the SBCC maintain any sprinkler requirements for one and two family

dwellings in the appendix chapters of the IRC. This gives local building and fire authorities the ability to require sprinklers when warranted by local conditions. As stated earlier, he also could not find any data regarding fires in newer homes. In Wenatchee, the newer homes are not burning. It is the older homes; those that have unpermitted electrical work, that are catching fire and burning. Newer homes now are safer than ever before. With the addition of the proposed sprinkler requirements along with the proposed energy improvements, the additional cost impact on a new single family house could exceed another $6,000-10,000. In my jurisdiction this makes the cost of owning a home unfeasible to many potential homebuyers.

TAG member question/comment. He had the opportunity to vacation in Wenatchee and stayed in a cabin; he assumed the cabins are occupied 50 percent of the year at most. He asked what kind of issues does Cliff see in a vacation-type environment in that area when homes aren't occupied in the middle of winter and you've got sprinkler systems installed in them? There might be nobody in the homes for months at a time. Cliff said there could be the potential for freezing with the cold weather spells; particularly in Chelan where there are many vacation homes. The problem was people would come over for Labor Day weekend and they would leave and not come back until the spring. These homes would sometimes freeze because the residents would leave the air conditioner on.

New TAG member question/comment. What about when the newer homes become older? Isn't it a matter of maintenance? Cliff said the electrical systems put in the newer homes are much safer than in the older homes. The number one cause of fire in the United States is the occupants; so it not the age of the house, but the behavior of the occupants.

Gary Allsup/Building Official, Lacey. He is representing WABO as Government Relations Chair. WABO performed a survey regarding fire sprinklers and he would like to share a few comments from it. Members were asked two questions: Should the state keep fire sprinkler requirements as they are currently, i.e., voluntary? Or should the state move the requirements into the IRC as a mandatory provision? The survey allowed room for comment. Some of those comments were: 1) There are too many variables from jurisdiction to jurisdiction and having sprinklers covered in the appendix allows each governing body to make the decision that works best for their situation locally; 2) I'm a strong supporter of local control where citizens have the voice through their elected officials as to the community's needs and/or desires; 3) I discussed this with our local fire district recently. He suggested less expensive ways to provide the benefits of residential sprinklers without going to the expense of a sprinkler system. I think it is best to keep these decisions local; 4) This item should remain in the appendixes and let local jurisdictions adopt (or not) depending upon local water system demands. This survey had 102 votes to keep the sprinkler requirements as is, voluntary. We had 18 votes to move it into the IRC. This is pretty strong evidence that the building officials see this as a local control issue that needs to be decided locally. Our findings here back-up the testimony that the legislature didn't really intend for sprinklers to be made mandatory.

TAG Chair, Ray Allshouse, asked for comment from those on the phone.

David Barber/Builder; President: Homebuilders Association/Walla Walla. He has spoken with several contractors in the area and all are in opposition to making sprinkler systems mandatory in the IRC. We don't like the idea because the new houses after 1985 are more air tight and are safer to live in. He has also spoken with the building officials who say the older houses are the problem. If we want to do something let's see what we can do to help people who live in low-income homes who can't afford to upgrade and put in smoke detection systems or other ways to help them live in a safer home. One statistic he heard is that no one in the State of Washington has died in a home built after 1985. If that is the case and we are talking about public safety and not just somebody's home, then putting sprinkler systems in a newer home is not a direction we need to go. Keeping it a local decision is a great idea too. He would love to see Washington State reject the whole thing and continue working with builders to create quality, safe structures.

Roger Roach/Homeowner. He doesn't want to take a position on this. He pulled a sheet from the back of the room which showed statistics and underlined "beware of misleading percentages." So he looked at the FEMA website wondering what all the statistics mean. He found some of them interesting and it might be a way to reposition the sentiment that has been going on about mandate versus choice to the homeowner. Earlier there was a comment made by the man from Camas who said in response to someone not paying water bills people need to be responsible for their own actions. I also heard the nexus about what the real problem is and what the solution is. From the FEMA website, of the 2,500 deaths, it showed 1000, or 40%, came from a smoking-related incident. That's a social choice issue. So when we are talking about mandate or not mandate maybe the solution to that nexus is to tell people to stop smoking rather than charge for a fire system. Forty percent of all residential fires were related to somebody being alcohol-impaired in that residence during the fire. Only six percent of all the homes don't have smoke alarms, yet 40% of all the fires were within that six percent that don't have the smoke alarms. Seventy-five percent of the fires that were related to a fatality, in that fire the house also did not have an alarm or the alarm was not operable. With respect to firefighters I know that one death is too much, but when we are talking about mandating or not mandating and about choice, of the 100 firefighters that were killed, 40 of them were killed by actually fighting the fire. The rest were border issues such as a heart attack. So six of the 100 were actually killed by a fire-related incident within the fire where if sprinklers are an argument about saving the life of a firefighter, six of the 100 deaths were related to actual fire-fighting or burn-related incidents.

Don McDonald/Kenmore, Washington. This will not cover 99% of the existing housing stock in Washington state. So this is not a life-safety requirement. It is gilding the lily as far as housing is concerned and you are impacting new construction. There are other options. For instance in a house with a class A fire you can get a 5/8 inch garden hose which is NFPA standard 10 to put out a water-related fire. You can use a BC fire extinguisher in a kitchen to put out electrical and grease fires. So there are other options. You are right about occupant behavior but that also applies to the energy code. The building code's purpose is life-safety and this amendment doesn't really cover life-safety when you leave out 99% of the people. In Kenmore there are 5,000 houses; none of them will ever have a sprinkler system unless they choose voluntarily to

put it in. In the existing building code if you do a remodel on over 50% of the house, you are going to have to bring your house up to the present standard. So that creates a problem for remodelers. So I think this thing is really not life-safety oriented it is somebody's idea of putting a supercharger into the existing structure and he doesn't think it's necessary. It certainly isn't cost effective. With the present condition of the housing industry and the new underwriting requirements for building loans which is pretty tough, I don't think you want to add on another cost.

Zak Parpia/President, Himalaya Homes, former Council member of the SBCC. He has been building in Washington for the last 37 years. One very important question is whether this code has anything to do with health and safety; he believes it does not. It is purely property-selling. There was a statistic mentioned questioning whether or not there were there any fire-related deaths in homes built in the last 25 years. The short answer is zero; because people do not die by being burned, they die from smoke inhalation. In the 70's when we built homes we had one smoke detector in the house. Subsequently, it was determined to have a smoke detector in every bedroom. Then it was decided to have battery back-up to the smoke detectors. The next code change was to have it in every space in the house and have them all with battery back-up and all linked so if one goes off they all go off. You can see how this is evolving. We have championed this. These homeowners are my customers. To allow them to get hurt would make no sense at all.

We work with the Building Code Council locally and nationally to create codes that make it virtually impossible for somebody to die of burns. The dramatic reduction in deaths is evident. The question that came up is what causes these fires. The answer is personal behavior irrespective of the age of the home. Not irrespective to the age of the home is the number of linked, battery backed-up smoke detectors that are present. The current code requires those linked smoke detectors and one-hour self-closing fire doors, fire walls between any spaces that are mechanical, or between garages and habitable space. All common walls have the one-hour fire separation. We also have fire exits from basements with maximum 42" walls. All of these things were things we pushed. It made no logical sense to put in a window at 46" when a child couldn't get out of that. You have fire retardant material for children's sleepwear. We aren't allowed to put any penetrations between floors without a fire wall. Fire blocks on all stairways are required because that is what made fires move from one floor to another.

These codes are erroneous and they are worthless and expensive. There is no justification for them. He would urge Council to not even make it voluntary. It is the Council's job to educate the public. Why would you waste the money when it could be used to retrofit existing homes with smoke detectors that linked? Why would you have fire sprinkler systems when you have this excessive back-up system already in place? We have never been provided with how many deaths have occurred in homes; in such a report you should ask for details about the age and location of single family detached homes so we could research that. It is a red herring that is put out there. The sprinkler lobby, the insurance lobby, the fire chiefs lobby all have the 'burned baby syndrome' that comes out, that has no logical substantiation by evidence. Finally,

can you imagine the water damage, mold and sky high insurance costs should these sprinklers go off accidentally?

Ron Schumacher/Division Chief/Fire Marshal, Camas/Washougal Fire Dept. He has been in the fire service for 40 years from firefighter, to captain, to paramedic, to Fire Marshal and Fire Chief. This is a bit anecdotal; I'd like to share with you. Nothing changed me more than the morning of December 25, 1996. I was Battalion Chief and got a call for a fire at 4 a.m. I responded in my car, and a woman was out there in her bathrobe. I get emotional when I talk about this, and I think some of the stories we've heard today are bold-faced lies. This home with a fire had smoke detectors throughout, and the woman said she was barely able to get her children out. I go inside and the crew is wrapping up and there is a Christmas tree burned up. The sofa, which was near where the fire started, put out a lot of smoke. I walked into the bedroom and saw a pillow that looked like some child had been laying there. I walked upstairs and saw the outline of a young boy. I'm thinking this is just a smoky fire. This house is relatively new and it had all the smoke detectors and they were all interconnected.

The woman said her father lived there until November and he had cancer; he slept downstairs. Her son sleeps upstairs. If her father, who died in November was still around, she's not sure she could have gotten him out, because she had to run upstairs and grab her son and bring him down and the flames were licking up over their heads. I remember this to this day because the woman in that bathrobe was my wife, and that had a very profound effect on me and my relationship to fire in the fire service.

So when I hear people talk that smoke detectors are all you need; that's bogus because that's not all you need. They say a cup of water in the right place can put a fire out. Thirty percent of all fires start in the kitchen, they also start elsewhere. So I'm asking you to think about my story. Think about your parents as they move in as they get older and just because you have smoke detectors in your home it does not guarantee their safety. Smoke detectors are not the cure-all. They have a ten-year life and if you asked people if they replaced their smoke detector after ten years I bet 95% would say no. A sprinkler system will be there when you need it. It's like having a firefighter in every room. I come from a family of builders and I have two brothers that are builders and we banter back and forth about this issue. I know the costs involved. Some of the figures mentioned today are way above what it actually costs. We have to work together to develop some plans to make them affordable and make it financially feasible for the builders. As a Fire Chief I also want to say it costs over $1 million to staff a fire station right now, but when I know those homes will be sprinklered, maybe it doesn't need that much. Maybe I only need two people in that station because I know that every one of those houses are protected. If we work together we can reduce the cost of fire stations, we can reduce the size of streets, we can space the hydrants out further. It could be a win-win for both the builders and the fire service.

A question from a TAG member: Do you have any evidence how these sprinklers affect how the firefighter responds? Ron replied it is definitely going to safer. There was a fire in Camas and when the fire engine arrived there was nothing to be seen. The fire was in the kitchen and

the sprinkler head had put it out. We've seen video of fire fighters falling through roofs due to the lightweight construction of the home. Having a sprinklered home is definitely going to make fire fighting a lot safer for the fire crew. Flashover is reached between two to three minutes now, due to the fires with all the plastic being used currently.

A question from a TAG member: Would you say that if homes are sprinklered you would need fewer fire fighters? Ron's answer is there is always going to be need for fire fighters. There is a strong push toward four-person crews in the fire service for safety reasons. We could probably scale that back to two and three-person crews in an area that is fully sprinklered. Another question by TAG members: Do you have sprinklers in your house? Ron's indicated he added sprinklers when he remodeled.

Todd Bullock/Housing Hope, a non-profit housing developer, Snohomish County. We have a model of 'team home-building'a self-help home ownership program for hard-working families can build their own homes. These are usually low to very-low income families; without the program most of these families would never go beyond renting, and would be unable to achieve the 'American dream' of homeownership. Everything we have heard today says that fire sprinklers cost more. If we added any requirements to the home, the costs would rise to the point most of these families couldn't afford to participate in the program. When you are thinking about this, please think about the sectors of the population this might affect.

Garrett Huffman/Master Builders Association, King and Snohomish Counties. He is impressed with all those who have traveled to be here today and hopes to move forward with this today, not just hear the two sides of the debate. He offered that if you take a little bit of a twist and put it more into an incentive process and his organization would be more than happy to talk about trade-offs. The biggest problem is the city of Seattle is mentioning density. I would greatly appreciate having discussions with BIAW, building officials, fire departments, the fire marshals, the sprinkler installers and determine how do we turn this away from being an adversarial discussion, because there really should be an answer out there. The other topic he wants to address is retrofits. His organization would be highly supportive of that. It wouldn't only be the installers, but the remodelers would benefit from the retrofits. We would love to have that conversation as well.

Kay Cash, Director of Acquisitions and Development for the Peninsula Housing Authority had a letter read into the record: "I am writing to you, members of the State Building Code Council's Residential Code TAG, to express my concern with the proposed amendment 12-014: Residential Sprinklers, being presented at the TAG meeting on May 31, 2012. Our agency administers a home-ownership program targeted to lower income residents in Clallam and Jefferson counties. These households, the majority of which are working households, purchase lots and build their homes through a sweat equity model which allows them to qualify for a home mortgage utilizing their sweat equity as a down payment. These households have limited incomes and resources and this mutual self-help housing program is their only hope for homeownership. In rural counties such as Clallam and Jefferson the cost to install and maintain a residential system in areas not served by public water systems will easily approach $10,000 if

not more. This additional $10,000 in home construction costs will make it more difficult if not impossible for these families to qualify for a mortgage, thereby never realizing the American dream of homeownership. It appears once again state agencies and urban proponents do not respect the differences in rural areas of the state (that are) much different than their neighborhoods, nor recognize the financial impact(s) of their imposed actions. While it may seem reasonable to amend the code and require the installation of fire sprinklers in all single family homes, let me say it is not. Leaving the fire sprinkler regulation in the code appendix allowing local jurisdictions the option to adopt the rule as they see the need is what is reasonable. Signed, Kay Cash.

Ray then closed public testimony and opened deliberation for the TAG on proposal 12-014.

TAG Member Comments. Generally I am in favor of automatic sprinkler systems in the residential occupancies, but I've got a big "but." I come from a rural county, Pacific County, on the coast. Probably 80% of the population is on wells. One, they can't afford to get the fire flow so you would be putting an undue burden on them. I'm jumping back and forth on this because I see there are so many inadequacies. We have Camas who has gone really overboard in trying to help the people get trade-offs and if we take this out of the appendix and put in it in the code the way it is now there are no incentives for any of the jurisdictions to give trade-offs. Will they? Some will, but a lot will say they don't want to deal with this. It says you have to have sprinklers you're going to have to put them in. Bingo you will take people out of the buying market especially at this point in time when we haven't started to come out of this (economic) downturn. The sprinklers haven't saved a life and we don't know yet. They aren't in enough areas for us to take a statistical account. They say it will cost anywhere from $10-20,000. How much does it cost to bury a human being? I don't want to be crude but a casket can cost $8,000. But I don't think the bugs have been worked out sufficiently to take it out of the appendix at this point.

New TAG Member Comment. I agree that the incentives to builders to work with the jurisdiction are removed if we make it mandatory. I've seen it. We've got jurisdictions we are working that have no concessions. I also wanted to address the comments made by those who have been burned and what we've seen and the populations that she addressed. I've built literally 1,000 homes in my career. I haven't sold any to a handicapped person; mostly because they don't buy new homes. If they are that mobility challenged they buy in something that is directed more to somebody with a handicap, such as a condo or an apartment which are already sprinklered. The low income people that she addressed are just that. They can't afford new construction so they are either forced into the older homes or they are buying into programs that the cost of a sprinkler system keeps them out of a house. So the idea that we are going to save people in that income bracket sort of gets skewed. The elderly with mobility issues are generally buying in age related communities where the sprinkler is already a part of the community and those mobility issues are being addressed. They are not buying two story houses they are buying single story houses because of their mobility issues. I think the current way we have it and then work with those jurisdictions to come up with cost saving measures to offset the costs that are passed on

Tom Phillips/Building Official/TAG member said it was his association that made the proposal three years ago to put this in the appendix. Gary Allsup mentioned we polled the membership as far as what the feelings are now to make it mandatory and the majority felt that it should remain optional. If it comes for a vote, I'd vote against it. A lot of the reason is the inconsistencies and variations of situations throughout the state. It is a very complex problem and I would like to see it solved. My membership would look at it differently if there was some predictability in the cost of the installation and I think jurisdictions that really want it would do the things that Kenmore and Camas have done and provide some incentives for it, but I feel if we did it across the board right now it would, in some markets, make homebuilding not profitable. It would create a lot of problems for those local economies.

Willy Hill/Code Consultant/TAG member. I'd agree with what has just been said. I'd also like to comment to the sprinkler coalition a little bit. I've been sitting in on these debates for about three or four code cycles and I rarely hear a different message coming out. I hear the same figures and the same stats and they get argued the same way. The same issues seem to be bogging it down; this unpredictability that we are going to have with jurisdictions and code officials we know we are going to have. It has been brought up before. It's already been identified; but it doesn't seem like your cause has gone after that and tried to solve the part of the problem that keeps hanging it up. You need a different message, I think. I'm very much in favor of consistent enforcement. When I was president of WABO that was when we went signatory with the development of the International Building Code back in 2000 and we were all for code consistency. This issue with the sprinklers really tears on me because I'm one of the proponents that feel we should leave the I-codes alone. What's good for Ohio should be good for Washington State. I always have understood the need for geographic differences we have in the code. A house it going to burn down the same way in Chicago as it does here, so why can't it be the same. The fact is we still have the big inconsistencies of enforcement which are still out there and will be unless you figure out a way to bring statewide consensus to the municipalities and how to handle these issues and collectively enforce it and a consistent manner across the state.

Rick Lupton/TAG member, City of Seattle Engineering and Technical Codes Manager. I would like to mention something that hasn't been discussed. One of the things that come up at the national code is the problem of fire spreading into attics from the outside of the building; it is outside the sprinkler coverage area. Sprinklers are a good thing and are an incremental improvement over smoke detectors, but they aren't all resolving. When you add those factors to the inconsistencies between jurisdictions, it seems to me the solution we have currently in the code is a very good one; where jurisdictions within their own community can work those things out and accept sprinkler mandates if they so choose.

Annie O'Rourke, Drafting Solutions. We continue to see improvement in the way we build buildings. In IRC Chapter 5 we have an issue of having to put a lid on all our floor systems. It's a requirement if you have I-joists you now have to have a sheet rock lid, which would seem to address the issue of fire fighters accessing buildings and the whole floor system problems. We

are looking at greater fire separation than we used to have. The code continues to recognize small ways that we can improve our building practices at a minimal cost. I'm concerned about the rural areas. My neighbors have wells that generate between one-half to one gallon per minute. I have worked with people who are coming from out of the area. They want fire sprinklers and they realize that the price tag for the system on the well is running between $20-$25,000 in our area. In that situation they don't go with fire sprinklers. I think we need to keep this at the local level. Let the local jurisdiction look at their situation and make their determination. It's perfectly logical for a Kenmore where density is much greater to mandate they have fire sprinklers in all houses. I don't have a problem with that. It's when we get to these very rural areas where we are simply going to stop construction in some of these small water districts.

Another TAG member responded to Annie's comments. I've heard some people comment from some of the rural water districts. It seems to me that it's an advantage to have fire sprinklers in those situations because you can put in the holding tank and you don't have a good fire response time if you are out in the middle of nowhere. Annie remarked there was a house fire in rural Clallam County just before Thanksgiving last year. The house did burn to the ground; most of our fire departments are rural, her county does not mandate fire sprinklers at this point. The insurance company mandated that the particular rebuild, that she did the design for be sprinklered. That's fine. Let the private individuals make that determination. The insurance company said we are not going to let you rebuild in the same location where your response time might be 35 minutes without a fire sprinkler system.

Willy Hill/TAG member. Our firm, BHE, does a lot of work for independent water and sewer districts and I've bounced this issue off of their managers over the last six months. The fact is that some of these small, struggling, poorly-maintained water/sewer districts have the ability to increase fees and they will; they are going to have to. There will be some fee increases for upgrading other systems and for these fire sprinkler systems, if it is mandated. Our engineers have already told me if we require this they will go after the extra money to upsize the system.

Ray Allhouse/Council Chair/IRC TAG Chair said he can understand that. One thing that everybody can agree with, because nobody refuted it, is the amount of water necessary to put out a fire in a sprinkled building as opposed to one that isn't; it is the difference between hundreds of gallons and thousands of gallons. Another TAG member feels they will have go to with flow-through systems because of the condition their system is in. Ray feels that is a good point.

Another TAG member comments: It is counterintuitive to have a dedicated system if you have a pressure flow problem because a dedicated sprinkler system requires the double back-flow protection which is a huge friction loss impediment on a sprinkler system. We have found the advantage is to the combination. You basically take the plumbing system in the house; the cold water runs in the ceiling instead of under the floor, but it doesn't use any more water unless there is a fire and there is no back-flow preventer so there is no extra demand on the system, but the lack of the back-flow preventer actually allows the reduced pressure to make the

system work because you only need seven pounds at the most remote head or two heads depending on your design. So again if you run a 1 inch CPVC you can have over 1,000 feet of pipe in there. I don't understand because we are on a low pressure low supply system that they have to have that dedicated system. Another TAG member comments: We are also in a pretty hilly part of the United States and that seven pounds per square inch is different when you are going up four feet from take-out to the service, or you are going up 20 or 30 feet. They went from a worst case scenario. They are figuring they've got this low flow system, they've built 50 new houses, and then a wild-fire happens. Now all those sprinklers are trying to go off and they've got no water pressure. That's how they determine this. It isn't a single case scenario. They are always looking at what's going happen if the worst happens. It was a yearlong study where everybody that could have an influence on this report gave their opinion.

Annie O'Rourke made a motion that the TAG retains the existing four amendments that we currently have in the code that were sponsored by WABO. Tim Nogler said there might be some minor editorial adjustments that we need to make in the appendix language particularly as it relates to Appendix R in the P2904 to be sure it is consistent. Ray said understanding of this motion would that if there some editorial changes that those would be accommodated. Also the understanding is that this motion would be in lieu of consideration of the one on the table. The motion was seconded.

Discussion on the motion. John Gentry said he is fortunate because Vancouver, going back to the 70s, had laid the foundation for residential sprinkler systems. Just like Camas they don't charge for the systems, even commercial systems. We don't charge for the system update. The only cost to the homeowner is for the actual difference between the meters. We worked out discount permitting, and tried to expedite the permits on those. But I also hear there are a lot of cities and communities that aren't that fortunate. My concern is we keep going over and over this and I recognize that if the mandate would go through that would give a blanket to these jurisdictions not to address these changes. I'm also concerned that if we stay status quo that a lot of jurisdictions don't have to take any action and nothing happens. What if we flipped this around and we put the sprinklers back in the code, but then let the local jurisdiction just have the reverse of what it is right now. I can remember for a long time the local jurisdiction had to get the Building Code Council approval to require the sprinkler system. What if we flipped it around? The local jurisdiction can take the conscious choice to opt out without Building Code Council. Then the local government agency could make a conscious decision to not include this safety feature in the houses. It would force them on the local level to take some action. If we take the current status, it is too easy. Nothing changes.

Another comment from a TAG member. I understand why you are saying that and putting it in the body of the code we still have the problems with that Camas and Richland have been able to overcome. You are going to have jurisdictions that are going to say put it in and we are not going to give you any concessions. We are going back to the same problem that I have with taking it out of the appendix to begin with because there are so many problems out there that some jurisdictions will just not try to rectify. That's why I think we need to leave it in the

Appendix until we can get some mandatory trade-offs. I think it needs more work and refinement before we put it in the body of the code.

Annie comments it is unfair to assume jurisdictions did not entertain the notion. The jurisdictions that I operate in there was a discussion. I am also concerned about setting a precedent where we introduce something into the code that is a maximum and someone has to opt out of it. What's next? We are setting a precedent that is problematic. I understand your concern, but to assume that jurisdictions will not look at it is unfair.

Maybe I should clarify my statement that the Sprinkler Coalition should change their message. More accurately, change the strategy of how you deliver that message. Take some time to work with the elected officials and bring that discussion to them. It appears the last two code cycles have been save up and march forward with this wheel barrel load of data which is the same as every time before. Instead go to the decision makers and sell them on this. I ran across a blog on the internet of council agendas from back east where sprinkler documents were going to be heard by city council. It was amazing.

Jeff Peterson said there is a lot of differences in the local areas throughout the state and if you try and say that all the jurisdictions are going to act a certain way; I know that's not going to happen. We've had experiences where we have put in fire sprinklers in the attached product and after we were complete with the product the jurisdiction came in and changed all the water meters and then sent us a bill for it. We had sold 85% of the product and their expectation was we expect you to pay for all the water meters we changed out. They didn't even consult us. We had all the background information for the design. It was all engineered. We do work with jurisdictions and leave it in their hands and not provide a fair working ground for people who are trying to put something out there and expect a return for a lot of work over a ten year period of time; it is scary. I would not want to put all my faith in the jurisdiction that they are going to work with us. That is not realistic.

Rick Lupton commented that he understands where Jeff is coming from, I would think a jurisdiction would have a hard time saying it's okay to go to that lesser standard, even if the state says it's okay. Can't part of our recommendation to Council be that they recommend back to our legislature there needs to be some help in getting a level playing field with the water meters. Ray doesn't see where that would be a problem. Rick feels there is a huge range on the cost from one jurisdiction to another because of these problems.

Ray repeated the motion which is to retain the existing language, but update it to reflect any editorial changes as shown in the 2012 code and asked for a vote. The motion carried with one opposed. John Gentry will write a minority report on it.

<u>Other Business</u>

Tim Nogler reported we had an additional item. We will send out a status report on all the existing amendments and the proposals. There are a couple of outstanding items. Please take a look at this

language. We meet again next Thursday at 9:30 at the city hall and we are hoping to wrap this up. We have to go over a proposal from Thurston County and we will have the proponent speaking to that issue. That proposal deals with grab bars in adult family homes.

Adjourn

As there was no other business, the meeting was adjourned.