



STATE OF WASHINGTON

STATE BUILDING CODE COUNCIL

128-10th Avenue SW • P.O. Box 42525 • Olympia, Washington 98504-2525
(360) 725-2966 • fax (360) 586-9383 • e-mail sbcc@cted.wa.gov • www.sbcc.wa.gov

MINUTES PRIVATE RESIDENTIAL FIRE SPRINKLER SYSTEMS TECHNICAL ADVISORY GROUP

Date: April 22, 2008
Location: Washington PUD Association, Olympia

TAG Members Present: John Neff, Chair; Stan Amas; Jerry Benner; John Chelminiak; John Cochran; Don Davidson; Ted Hardiman; Joe Herr; Jim Hudson; John Kounts; Scott Kramer; Marc Marcantonio; Mac McDowell; John Norris; Darrin Parsons; Anjela Pimentel; Doug Quinn; Greg Rogers; Brandy Smith

TAG Members Absent: Dick Bower, Hal Schlomann

Other Council Members Present: Tom Kinsman, Pat McBride, Dale Wentworth

Visitors Present: Brian Minnich, Robert Mack, Orlando Cano, Doug Levy, Garrett Huffman, David Velderman, Tony Lindgren, Tom Hill

CALL TO ORDER

Chairman Neff called the meeting to order at 10 a.m.

Steve Johnson welcomed TAG members to the newly constructed green building housing the Washington PUD Association. He said it's the first new construction U.S. Green Building Council platinum building and the largest roof-mounted solar system in Washington State. At 8.2 kilowatt hours, the building generates more energy than it uses. The excess is sold to Puget Sound Energy.

Steve spoke in favor of using building codes to achieve energy efficiency goals. He offered to discuss the issue in greater depth with any interested parties.

TAG members and visitors introduced themselves, including who they represent.

REVIEW AND APPROVE AGENDA

John Neff summarized the agenda. It was approved as written.

SUBSTITUTE HOUSE BILL NO. 2575

A copy of SHB 2575 was displayed for members to follow while **John Neff** summarized the bill. He said the statute directs the State Building Code Council (Council) to convene a technical advisory group (TAG) to examine the issues, barriers and incentives pertaining to private residential fire sprinkler systems (PRFSS). The TAG will research and review policies and procedures pertaining to PRFSS, including technical statutory and liability issues that promote or discourage the installation of PRFSS.

The statute directs the Council to develop recommendations for eradicating barriers that prevent the voluntary installation of PRFSS. Recommendations, based on TAG findings, shall be reported by the Council to appropriate legislative committees by January 15, 2009.

In conclusion, John said SHB 2575 specifically states that it is **not** the legislative intent to mandate PRFSS or to reduce local regulatory authority.

As an example of issues the TAG might be interested in, **John Neff** said during a recent presentation he made to cross connection people, he heard that backflow people have issues with the NFPA standard because of dead-end lines that cause a cross connection.

Tim Nogler reviewed the TAG procedure. Members, primary and alternate, are appointed by the Council Chair. Tim called attention to a TAG directory, which also includes various interested parties.

TAG meetings are generally conducted as open meetings. Agreement is noted by consensus, rather than voting under Robert's Rules of Order. Minority reports may be filed to reflect divergent opinions.

TAG findings will be reported to the Council. To aid that process, several Council members have been appointed as PRFSS TAG members and several others are attending today as interested parties. The Council will finalize and ratify the report of TAG findings prior to forwarding it to the Legislature.

John Kounts, Washington PUD Association, suggested that nonTAG, interested parties attending today's meeting be considered full participants in the process. **John Neff** said TAG meetings are always open, welcoming information from everyone.

Greg Rogers, Association of Fire Marshals, asked if the report to be submitted to the Legislature is a written report. **Orlando Cano, House Democratic Caucus**, answered that SHB 2575 calls for a written report to be submitted to respective legislative committees. On the House side, he said that is the Local Government Committee. Orlando noted that pre-session legislative committee meetings may necessitate the submission of a preliminary report in December prior to the final report in January. **John Neff** agreed with the need for a preliminary report, at least by December, assuming the recommendations will be used to make statutory changes.

Greg Rogers expressed concern that the Council may misrepresent the PRFSS TAG in its report to the Legislature. He asked, if the Council disagrees with TAG findings and reports something other than TAG findings to the Legislature, can individual PRFSS TAG members go directly to legislative committees as representing the TAG. **Orlando** answered yes. **John Neff** noted that SHB 2575 states that the recommendations must consider the work of the advisory group and the findings of the advisory group must be reported by the Council to the Legislature.

TAG WORK PLAN

A draft work plan for the PRFSS TAG was displayed while **John Neff** summarized it. John said he and Tim developed the list from the statute, legislative hearings, and various comments they've heard. He asked for discussion, additions or modifications. **Tim** said a liability issue he thought of after developing the list is the warranty of sprinkler systems.

Pat McBride, representing general construction, residential and multifamily, suggested doing an economic analysis of other systems that provide life/safety benefits equivalent to fire sprinklers.

John Norris, representing residential builders, said he's not convinced that sprinklers offer the best life/safety benefit. Comparing them to hot-wired smoke detectors using 2004 data, he said smoke alarms seem to do the job if they're working. He noted that during 2004 three deaths were reported in sprinklered residences. John said the majority of smoke detector failings were in battery-operated models prior to 1992. He suggested it might be a better use of money to retrofit older structures to install hot-wired smoke detectors.

To John Norris' complaint that data is lacking whether structures are new with hot-wired smoke detectors or old, **Anjela Pimentel** said the **State Fire Marshal's Office** has that data. She offered to bring it to the next meeting.

John Neff pointed out that the TAG's mission is dictated by SHB 2575: to examine the issues, barriers and incentives pertaining to the voluntary installation of PRFSS. The bill doesn't mandate sprinklers. It simply asks what prohibits people from voluntarily installing them.

Mac McDowell, Washington Association of Counties, said the question whether or not fire sprinklers are better than hard-wired smoke detectors is valid in someone's determination whether or not to voluntarily install a fire sprinkler system. He'd like to see data comparing the two. John Neff agreed that the question is valid.

David Velderman, American Institute of Building Design, suggested compiling a list of technology that complements or supplements fire sprinklers, such as smoke detectors.

Jerry Benner, representing building inspectors, asked John Neff if he believes this study is a prelude to mandatory sprinklers. John said the Legislature clearly, specifically stated in SHB 2575 that its intent is not to mandate sprinklers.

Joe Herr, residential builders, said the biggest barrier to the voluntary installation of PRFSS at this point in time is the cost of the sprinkler systems. He cited an example of a former assistant fire chief who wanted sprinklers in his residence and was extremely upset when informed of the cost. He eventually paid it, but the cost almost prevented him from doing so.

John Chelminiak, Association of Washington Cities, said information about the cost of installing sprinkler systems, everything involved in that cost, would be extremely helpful to him. He wondered if residential sprinklers give one a lower homeowners insurance rate.

Anjela Pimentel, State Fire Marshal's Office, said standardization and hookup fees vary significantly from one jurisdiction to another. A couple of legislative sessions ago, the cost of installing fire sprinkler systems varied from \$500 to \$20,000. She said some jurisdictions charge a standby rate for water sitting in a pipe being available for use. Anjela suggested the TAG may wish to examine a number of jurisdictions, determining why the rates so drastically vary and if there are incentives to change them.

John Norris said of the 2,500 homes he's built, no homeowner has voluntarily requested a sprinkler system. He's installed them, but only when required by the jurisdiction. One he installed in the City of Kirkland cost \$5,000. Because the size of the pipe increased from three-quarters inch to one inch, the meter added \$10,000 to that cost. John wondered why fire sprinkler systems are charged for the water used to extinguish fires when fire departments accessing water at hydrants to fight fires aren't charged for the water.

John Norris also said City of Kent meters are not guaranteed to work on a fire sprinkler system. That city wants a backflow device rather than a meter on a fire sprinkler system during the interim until it can find a meter guaranteed to work on a fire sprinkler system.

John Neff said the only fee charged by the Cities of Lacey and Olympia is \$250, to change the meter from five-eighths inch to one inch.

Anjela Pimentel suggested it would be helpful to have a presentation at a future meeting by the fire chiefs association, explaining the state fire service and why voluntary or mandatory fire sprinklers are needed. She said most homeowners don't know that the fire service in Washington State is 85 percent volunteer. Because of that, there may be time delays and quantity as well as quality problems. Anjela said some rural communities may need fire sprinklers more than others.

Jerry Benner asked if the purpose of fire sprinklers is to save lives or to save property. Anjela answered that the purpose is to save lives. Jerry said smoke alarms save lives, regardless of the rural location of the home, and damaged property is insured. He said people might voluntarily install a sprinkler system if they were aware of the perceived value of that system. At present, 99 percent of people see no value.

John Neff noted the film industry has led people to believe that when the fire alarm sounds, every sprinkler head in the system is activated.

Greg Rogers agreed with Jerry Benner. He said the majority of people will say they want sprinklers to water their grass. However Greg disagreed with statements previously made about no one voluntarily requesting that their home be sprinklered. He said during the last 10 years of his fire service in Washington, 20-30 homes have been voluntarily sprinklered. Two reasons for voluntary installation of a sprinkler system are because the homeowners moved from back east where they previously had sprinklers, or because of access problems.

Greg Rogers said he'd like the PRFSS TAG to look at the benefits a homeowner may receive from a jurisdiction requiring sprinkler installation because of access problems. An example is Port Orchard, currently contemplating raising their water rates. That jurisdiction allows a 70 percent reduction of its general capital facilities charge for voluntarily installing a sprinkler system. That credit saves a homeowner about \$3,200, comparable to a free sprinkler system installation in a 1,500 square foot home. Port Orchard also doesn't charge for upgrading connection fees.

Greg said many jurisdictions allow similar benefits. Tacoma has a one inch connection with a three-quarters inch meter for a five-eighths inch outlet. Bremerton waives all connection fees, permit fees and plan review fees if a residential fire sprinkler system is voluntarily installed. Greg said he'd like to see such benefits statewide.

Greg said the fire service has historically had a good working relationship with building officials. Unfortunately they haven't worked as closely with water people. He hopes to see a better fire/water relationship emerge from this TAG.

Greg suggested water companies should receive credit under new water conservation rules that became effective this year if they allow incentives such as Tacoma that result in the voluntary installation of fire sprinklers. **John Neff** asked if those rules involve the Department of Health or the Department of Ecology. **Jim Hudson** answered it is the Department of Health. John Neff asked Jim to bring information on the new water

conservation rules to educate the TAG. Jim noted that he's not readily able to see how to tie residential fire sprinkler systems to water conservation.

Marc Marcantonio, representing mutual water companies, pointed out that sprinklers affect water utilities very differently, depending upon the type of water utility. For example, he said what works for the City of Tacoma won't work for the mutual water company that serves 10,000 residents in the City of Edgewood.

In response to John Norris, Marc said the cost is not just the amount of water provided. An infrastructure has to be built to have water available to make the fire sprinkler systems work. In smaller systems, reservoirs may have to be built up to increase the volume enough for fire flow and system pressures. Those reservoirs are an added burden to small jurisdictions that haven't had to build large reservoirs for malls and large buildings.

The fact that water companies are in the public health business is a very real concern. They have a responsibility of provide safe, clean drinking water. Marc said every fire line is a dead end. There are ways to address that, but they affect cost. From a water conservation standpoint, every dead end requires constant flushing to keep the water clean. Flushing wastes water.

Marc said the issue of PRFSS raises legal questions for water companies. If a customer's water is shut off for nonpayment, what is the liability to the water company for putting customers at risk because fire sprinkler systems are consequentially nonoperable.

John Neff suggested the TAG needs to be educated during its next meeting about the different statutory constraints of mutual water companies, public utility districts, water districts and municipal water purveyors.

Mac McDowell said Island County, with a population of 75,000, doesn't have storage tanks in the vast majority of (~~its cities~~) the county. They only have pumps and pressure tanks. In rural counties, he said that's probably pretty standard. It could be a real problem in eastern Washington.

Greg Rogers, speaking to Marc Marcantonio's comment about liability, said there is an Attorney General's Opinion that states if the water is shut off in a house, that structure is then considered uninhabitable and no one should be occupying it. He asked Anjela to bring a copy of that AGO to the next meeting.

Stan Amas, representing residential sprinkler contractors, asked if reservoirs are sized by the number and size of meters in the usage area. **Marc Marcantonio** said they are to some degree, as well as the size of the mains that deliver water to the homes. The size of the mains affects the flow. And the number of people on the system affects pressure. He said a hydraulic analysis has to be done on the entire system. Reservoirs not located on top of the highest point in the system must build booster pump stations to increase the water pressure. That's very expensive because of the electricity involved.

Doug Quinn, Washington PUD Association, said water is a cost-of-service utility. There is no profit margin that water companies tuck away. Credited fees for one customer are transferred to another customer. However Doug acknowledged there may be other incentives. His preference is rededicating fire impact fees allowed by GMA into structures that choose to sprinkle.

John Neff summarized issues to be addressed at future meetings: other systems providing comparable life/safety, incentives, water conservation, fire impact fees. He asked if the insurance industry has other issues.

Scott Kramer, representing the insurance industry, said they have no big problems. He's comfortable with items already on the agenda for future meetings.

Pat McBride asked to have utility cost strategies added to the list for future review and discussion. **Doug Quinn** suggested that issues that restrict the authority of utility companies to unilaterally manage their systems' rates should be the focus of the TAG study.

Mac McDowell suggested investigating how many counties charge impact fees. He said while most cities do, he believes the majority of counties don't. **John Neff** said that Lacey doesn't charge either a fire or parks fee.

David Velderman asked if incentives would be to the locality, builder or homeowner. **John Neff** answered that types of incentives is one of the recommendations to be included in the report from the Council to the Legislature. He said it may be simply a tax incentive, as in Virginia.

Jim Hudson said Mason County gave a credit for sprinkler systems in homes that reduced the storage allocation of the Fire Marshal's Office.

John Neff said the TAG needs to examine the rules of all of the various water purveyors. It also needs to be educated about the actual operation of a sprinkler system. **Tim** said he'll work with Jim Hudson and water purveyors to compile data for TAG review.

John Neff said he anticipated holding one TAG meeting per month. His anticipated timeline is for the TAG to report to the Council in October, so the Council can consider the PRFSS TAG report at its November meeting. However, if needed, the Council may hold a special meeting in December.

Greg Rogers asked whether those six meetings will be for a few hours each or full-day meetings. Other TAG member questioned if the work the TAG has to do can be accomplished in that time. It was decided that meeting for either one-half day or a full day next month will give a better indication of the time needed to accomplish everything.

Doug Quinn said he'll try to consolidate his presentation into one hour. He suggested everyone working around one-hour blocks, to make the next meeting workable.

John Kounts said one way to perhaps streamline the presentations on water systems is to organize them into two groups: (1) general purpose government water utilities, the cities and counties, that have regulatory authority and are backed by police power; and (2) special purpose government groups, like PUDs, water districts, mutuals and private systems, that don't have police power. He said there are distinct differences between these two groups.

Jim Hudson pointed out that 200,000 private residences receive water from their own well.

Greg Rogers said he's viewing incentives very broadly, beyond water purveyors and connection fees. While the TAG may wish to concentrate on water systems, other incentives to examine are fire impact fees and homeowners' insurance savings. Greg asked the TAG to determine as many incentives as possible for everyone, including those on private wells. He said it would be interesting to determine how insurance companies establish their rate structure, because the rate reduction for having residential sprinklers varies from five to 15 percent, depending upon the insurance company.

Jim Hudson noted that those incentives already exist. He said the goal is for the TAG to gather enough information to recommend new incentives. **Greg Rogers** responded that it's not a level playing field. He asked why differences exist. He said confusion exists in the insurance industry, evidenced by receiving one answer from an insurance agent and a different one from an underwriter.

Pat McBride suggested the TAG may wish to look at the adequacy of the infrastructure of water systems, whether or not they are big enough and reliable enough to run fire sprinkler systems.

David Velderman said the 13R sprinkler code is a hindrance for many communities to build cost-effective systems. **John Neff** said it's 13D. He said the TAG needs to discuss backflow issues, even with flow-through systems.

Greg Rogers asked that the presentation on water systems at the next meeting include how and why a "general capital facilities charge" is established.

Darrin Parsons, representing residential sprinkler fitters, said studies exist that the TAG might examine for incentives. For example, Scottsdale, Arizona was able to decrease the size of water mains and decrease the number of fire houses built and engines bought. Life/safety concerns were not the catalyst for those changes. Rather it was water conservation, which he said was also, in large part, why sprinklers were mandated there. A tremendous amount of water was saved by those changes in that community.

Marc Marcantonio asked TAG members to keep in mind during the presentation on the different types of water systems that huge differences may occur in the same type of system, mutuals for example. He said many companies are very old, with entrenched

philosophies, bylaws and financial plans. **John Neff** said the TAG will examine the statutes that govern the water systems.

John Norris said he doesn't understand how a fire sprinkler system conserves water. **Stan Amas** cited an example of a huge condo fire in the City of Edmonds. He said the one-two million gallons of water the fire department used in extinguishing that fire is the savings a sprinkler system would have saved had it prevented the fire from occurring. **Darrin Parsons** guessed the average flow of water from a single, operating sprinkler head is around 20 gallons per minute. **Brandy Smith, representing residential sprinkler contractors**, confirmed that amount. Darrin said that compares to the 250 gallons a minute delivered by a fire department after the fire increases in size.

John Norris asked how much of a fire department's time is nonfire-related, for heart attacks, strokes and other medical calls. **John Neff** responded about 85 percent. John Norris expressed doubt that fire departments would be willing to give up fire mitigation fees. He also noted that fire mitigation fees are substantially less than the cost of installing fire sprinkler systems. **Anjela Pimentel** noted there are staffing differences between fire trucks and EMS vehicles.

Mac McDowell said fire departments aren't going to decrease their staffing for a miniscule percentage of voluntarily installed sprinkler systems. In rebuttal, **Greg Rogers** said some jurisdictions do waive their impact fees. He said EMS levies fund EMS services 100 percent. Similarly, fire levy funds are completely for fire protection. The EMS and fire operations are completely separate. **Doug Quinn** added that fire impact fees authorized by the Growth Management Act are specifically for fire and capital facilities related to fire. **Greg** noted that while municipalities have fire impact fees, fire districts do not. He said it's questionable whether the two fire authorities in Washington State will have fire impact fees.

John Chelminiak said cities provide a wide range of services. Bellevue is a full-service city, providing both utility service and fire service. Although the city has the authority to charge impact fees, presently only a small transportation impact fee is charged. John offered to arrange for the Association of Washington Cities to present a 45-minute review of the structure and services of cities, followed by a 15-minute question and answer session.

Jerry Benner said Auburn is one of two fire authorities in the state. He said Auburn, Pacific and Algona all combined into one regional valley fire authority. He offered to check with his water and fire people before the next meeting

MEETING SCHEDULE

The next meeting was scheduled for Tuesday, May 20, beginning at 9 a.m. The location is the same as this meeting. John anticipated that the meeting will last at least until 1 p.m.

Several members asked to have written copies of presentations before the meeting, allowing time to formulate questions. Tim agreed to send information out as soon as it's available, hopefully at least a week before the meeting. He said he'll e-mail the agenda to members immediately.

ADJOURNMENT

John Neff adjourned the meeting at 12.14.