



STATE OF WASHINGTON

## BOARD FOR VOLUNTEER FIREFIGHTERS & RESERVE OFFICERS

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### Emergency Responders and Second-hand Marijuana Smoke

Since the passage of I-502, there has been an increased amount of inquiries regarding the effect of second-hand marijuana smoke and the increased risk of exposure for emergency responders. Recently, Rep. Dan Kristiansen, from the 39<sup>th</sup> Legislative District, asked the Board for Volunteer Firefighters and the Washington Fire Commissioner's Association to research the matter to see if legislation was needed to protect volunteer emergency responders in their regular employment.

As everyone is aware, the majority of volunteer emergency responders have regular employment outside of the fire service. Many employers require that their employees submit to random drug tests, both at the time of hire, and throughout employment. While emergency responders were always at a greater risk of second-hand exposure to drugs, the passage of I-502, which legalized recreational marijuana, increased the exposure to second-hand smoke. Although marijuana has been legalized for recreational use, employers are still allowed to develop and enforce policies prohibiting its use. As a result, many volunteer emergency responders are concerned that their volunteer duties could cause them to be disciplined, or fired, by their regular employers.

The Board for Volunteer Firefighters (BVFF), in coordination with the Washington Fire Commissioner's Association (WFCA) has studied all available research and information currently available. During our research, we have come to the conclusion that it would be extremely unlikely that an emergency responder could have a positive result on a drug test based solely on second-hand exposure to marijuana smoke while in the performance of their duties.

Several independent tests have been performed to determine the risk to testing positive on a drug test. To understand the test results, one must first know that the majority of urine-based test will only show a positive result if there are 50ng/ml 9-Carboxy-THC. Some workplace drug screens will show levels as low as 20ng/ml. Home Health Testing, a major producer of Home-based drug test kits, conducted a test where someone was placed in an isolated room where THC smoke was pumped into it for 24 hours straight. At the conclusion of the exposure, a drug test was administered, and the person did not register a positive reading. In a lab test, an amount of 3 or 4 ng was detected in the sample. Researchers from the National Institute on Drug Abuse conducted one of the first studies on the



exposure to second-hand smoke in 1986. In that test, they placed 90 different participants in an 8-by-7 room, without ventilation, and exposed subjects to the smoke of four joints over a period of one hour. After administering drug tests, all 90 participants tested negative. The researchers increased the number of joints smoked to 16. When the tests were administered immediately after exposure, the majority of the participants tested positive. Their mg/ml results were all similar to the levels that would be seen if they had smoked one joint.

If we apply the test results to emergency responders, one would have to assume that the responders would request that all joints be put out upon entering an environment where smoking is taking place. In addition, one would assume that smoking would not be allowed in department rigs or vehicles. With these assumptions, emergency responders entering into a scene where people have been smoking marijuana would not have a significant enough exposure to cause a positive result on a random drug test such as those used by employers. In a laboratory test, trace amounts might be found, but still not enough to cause a positive result to be reported to an employer.

In the case where saliva tests are used, the cutoff level is 100 ng and, again, the level of exposure to emergency responders exposed to second-hand smoke will register far less than that level. If hair samples are a concern, the way that labs analyze hair makes second-hand contamination virtually impossible. All labs that have a positive hair test on the first test are required to perform a "wash" test. They have to literally wash the hair in a solution and test both the clean hair, and the water used to wash it. If the hair tests negative and the wash water tests positive, they assume that the positive is a result of second-hand smoke and the results are reported to the employer as negative.

The final concern that the BVFF and WFOA addressed was the potential for a DUI should a responder enter a smoke-filled environment and then drive. The recently passed I-502 has set the legal marijuana blood intoxication level at 5ng/ml. So, what are the chances that a volunteer could test positive for DUI after exposure to second-hand smoke? The American Association of Clinical Chemistry conducted a study of 22 different people who reported a daily use of at least 10 joints a day. Twenty-four hours after their last joint, all 22 people tested at blood levels of less than 5ng/ml. As a result, the chances that an emergency responder could test positive on a blood test after exposure to second-hand marijuana smoke on a call is extremely slim.

In conclusion, it would be virtually impossible for an emergency responder to test positive for THC on any type of a test after exposure to second-hand smoke in the line of duty. Even though there are mitigating factors that could affect the test results (weight, hair color, strength of the marijuana exposed to), the responders would still test negative. That being said, the BVFF still encourages departments to report any significant exposures the same as any other exposure to toxic substances. The BVFF maintains all exposure reports for a minimum of 20 years. With a waiver from the responder, the BVFF could "certify" an exposure to an employer in the unlikely event that a false positive did occur. The

BVFF, the WFCA, and Rep. Kristiansen's Office will continue to monitor new research as it becomes available. Should there come a time when either research or actual cases become available to demonstrate a risk to emergency responders, we will seek legislation to provide workplace protection for emergency responders exposed to second-hand smoke.

Please direct any technical questions, or questions regarding reporting exposures to Executive Secretary Brigette K. Smith at the Board for Volunteer Firefighters and Reserve Officers.