



## **International Police Mountain Bike Association**

### **Board Position Letter Concerning Large Diameter Wheels 02/28/2008**

In 1999, the 29-inch mountain bike wheel was introduced. The “29er” mountain bike has been embraced by the mountain bike industry as a viable option for off-road enthusiasts. Recently, the 27.5 inch mountain bike wheel was introduced. At this time, it remains to be seen how the new 27.5 wheel size (aka “650b” wheel) will be embraced by the industry and masses.

Historically, the public safety bicycle has been equipped with 26 inch wheels. IPMBA’s training programs were developed around this standard. Over the past two years, a growing number of public safety cyclists have petitioned for the acceptance of the 29er in IPMBA training courses. After reviewing the state of the technology relative to the needs of public safety cyclists, IPMBA does not recommend using the 29-inch wheel at this time.

Although there are inherent advantages to a larger diameter wheel, i.e., the wheel rolls over obstacles better and there is a greater tire contact patch with a 29er tire versus the “standard” 26-inch tire, these are outweighed by the disadvantages.

- The mountain bike geometry and design of the 29er is affected by the larger wheel size, so that the wheel takes more room, forcing the angles of the bike frame to change.
- The higher bottom bracket results in a higher center of gravity, and therefore less balance and control.
- The top tube is higher, providing less stand-over room.
- Smaller riders may experience an overlap between the front wheel and the forward pedaling foot, which can result in a safety issue.
- The geometry of the 29er positions the rider more forward than a “standard” mountain bike, which inhibits smaller riders from shifting their weight back to allow for more front end control.
- While a 29er will float over obstacles, it requires greater skill to un-weight and loft the heavier front end of the 29er, which could be problematic when negotiating stair ascents.
- The 29er wheel does not offer the lateral strength or the strength to carry heavy loads that the 26 inch wheel does. This has critical implications for those that carry heavy loads in panniers and subject their bikes to extreme stress.
- The longer wheelbase of the 29er can make it more difficult for basic course students to complete the basic 10 foot box maneuver, potentially setting the student up for difficulties and/or failure.
- While the industry has provided more of an availability of 29er parts for the consumer, finding parts can be problematic in remote areas.

Overall, the IPMBA Board does not support the use of a 29er mountain bike for public safety purposes; therefore, at this time, they may not be used during IPMBA-sponsored training courses and events. When conducting courses outside of IPMBA events, it remains the responsibility of each instructor to ensure that his or her students are equipped with high-quality mountain bikes, properly fit to the rider, and to evaluate the safety of the bikes prior to each course. If the 29er can be adapted for all public safety cyclists, IPMBA will reevaluate its stance. In the meantime, the “standard” mountain bike with its 26-inch wheels remains the most competent design for public safety cycling and IPMBA’s programs.