Why we recommend RTK

Early versions of GPS controlled sprayers in the golf course maintenance business used the correction (also called augmentation) technology known as WAAS, which stands for Wide Area Augmentation System.

- Without getting too technical, think of "correction" as multiple moving GPS satellites "estimating" your location and then refining the accuracy of that estimate by either mathematically correcting for known variables or by comparing the estimate to known points on the earth. Alternate forms of correction can result in a variety of accuracies.

Accuracy is typically measured in two primary areas, **time and distance**.

Distance is the more common measurement for most users of GPS. Simply if you map a point on the earth using GPS, how close, measured in distance, is the recorded point to the actual point. Most people are surprised to learn that there are technologies available to all of us that can accurately map a point on the earth to within 1cm. That's right less than one inch. WAAS is not that accurate.

- **The typical variance is 9"** with a point mapped **using WAAS**. It can even be greater.

Measuring the accuracy of GPS over time can be just as critical as the accuracy of distance. Based on the correction technology you use to map locations using GPS your accuracy can change over time.

- The typical accuracy when using **WAAS can become unusable after** as little as **15 minutes**.

When GPS was first introduced to the golf course maintenance market, along with individual nozzle control, an accuracy within 9" for a period of 15 minutes was still better than operators manually controlling 3 boom sections. Many of the early users of this technology were "happy with WAAS", but this is 2018.

RTK, which stands for Real-Time Kinematic, was developed in the 1990s and has become commonplace in agriculture and construction because of its phenomenal accuracy over time and distance. Once Raven Industries began offering its Slingshot RTK products to the golf course maintenance market through Turflux there really was no reason to settle for WAAS any longer.

- **The typical variance is LESS THAN 1"** when a point is mapped **using RTK**.

- The accuracy when using **RTK - DOES NOT CHANGE over time**.

When the difference in cost is typically less than $15,000 between a system using WAAS and a system using RTK, the improved efficiency and usability with RTK accuracy are well worth the original investment.

If you are "happy with WAAS" you will be ecstatic with RTK.