Trimble Navigation Limited
935 Stewart Drive
Sunnyvale, California 94085

October 15, 2014

State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100
Attention: Jeanine Townsend, Clerk to the Board

Re: Dry Year Report Comments

Dear Ms. Townsend:

The Agriculture Division of Trimble Navigation Limited, a California corporation ("Trimble"), is providing comments in regards to recommendations for improvements to the implementation and enforcement of water rights during drought conditions in the State of California. Trimble believes that its broad offerings of precision agriculture solutions can help address California's water crisis that will not only benefit the individual farmer, but also the State.

Trimble Agriculture solutions enable customers to maximize efficiency and reduce inputs while also protecting natural resources and the environment. Trimble's precision agriculture solutions cover all seasons, crops, terrains, and farm sizes, and its brand-agnostic strategy allows farmers to use Trimble products on most equipment—regardless of manufacturer.

One main objective of Trimble's Agriculture Division is to provide farmers with a complete suite of solutions to design and automate the entire farm water ecosystem. This objective not only impacts how farmers utilize water, but also how they manage their land, soil, and inputs. To help achieve this, Trimble offers solutions to help farmers apply the right amount of water, fertilizer, or chemicals in the right place at the right time, while also providing data to help farmers make informed decisions year after year.

Such solutions that contribute to entire farm management include land leveling, drainage, and irrigation solutions that enable farmers to optimize water distribution; soil information systems that help farmers understand their soil properties for better input management; and the Connected Farm™ solution that allows farmers to collect, share, and manage information across their farm in real time.

Soil Information

The Trimble® Soil Information System™ ("SIS") solution is an industry-leading soil mapping technology that uses advanced sensors and intelligent targeting and geo-processing algorithms to produce high-resolution, accurate soil and topographic information. SIS identifies the individual patterns that exist for each soil property, such as plant available water, salt concentration levels, nutrient holding capacity, compaction, root zone depth, etc.

In comparison to EC/EM maps which are based only on the conductivity of the soil, SIS maps are created from a combination of EM mapping, physical soil samples, and proprietary data processing to create 3D maps of many individual soil properties—all of which vary independently from one another at a given location.

One of the soil properties produced by SIS is called plant available water ("PAW"). This is the amount of water that the soil can hold and is available for the plant's growth and development. PAW is dependent on a variety of soil properties including soil density, texture, structure, organic matter, chemical properties, thickness, and orientation of these properties, and thus varies across the field.

The PAW values can help farmers determine irrigation maps based on zones of similar PAW values. These irrigation zones can be utilized by variable rate irrigation systems to apply the right amount of water in the right place—resulting in efficient water use based on the soil and crop requirements.

Irrigation

The Trimble® Irrigate-IQ™ precision irrigation solution is a GPS-controlled irrigation hardware and software solution that enables farmers to control pivot irrigators, create irrigation watering plans, perform variable rate irrigation, and receive reports.

The Irrigate-IQ solution's variable rate irrigation utilizes individual nozzle control to maintain the spatial accuracy of the watering plan. Each nozzle is controlled independently from one another, and its flow rate varies based on the watering plan and location. If the flow rate on the nozzle reaches its maximum and more water is required, the pivot will slow down and each nozzle along the pivot will adjust to accommodate the amount of water needed at that specific location. Traditional zone or speed controlled variable rate irrigation systems do not provide this high level of targeting and accuracy in comparison.

A watering plan serves as the basis for variable rate irrigation within the Irrigate-IQ solution. It can be as simple as excluding areas that don't need water such as roads and other fixed landmarks, or as complex as defined by the SIS irrigation zone map. Targeted water application that is modeled from soil properties can help ensure that the optimal amount of water is getting to the root zone for plant uptake. This results in more efficient use of water, while contributing to increased yield and improved quality.

For farmers who have strict water allocations, irrigation zone maps that are produced from SIS data can help them make informed decisions on their farm. For example, they may want to grow a more water-efficient crop in a certain area or even take that area out of production. The purpose of SIS and its integration with the Irrigate-IQ solution is to ensure water is being used efficiently, and not being wasted.

Connected Farm

To address the topic of management of farm data, Trimble has developed the Connected Farm solution, which enables farmers to efficiently manage the large amount of data their farm applications are recording. The solution provides wireless data transfer between the farm and the office or between vehicles.

Much of this data can be viewed online on a customizable dashboard that the provides a centralized snapshot of farm operations, like irrigation monitoring, as well as key information impacting farm

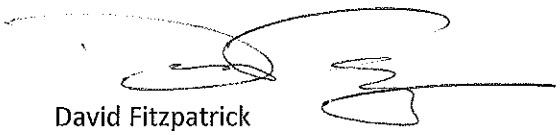
decisions such as weather, rainfall totals, commodity prices, etc. This information is valuable to farmers in making decisions about their day-to-day farming activities.

The solutions outlined above represent a small portion of Trimble's whole farm solutions. Trimble also offers solutions for effective nutrient and pest management as well as means to quickly evaluate crop health. Its entire portfolio of products is attached.

The current situation in California requires such technology and data to effectively and optimally manage its water resources for agriculture. As more farmers have access to these tools, the better they can prepare and manage their farms during dry periods. It is my hope that the State of California will consider Trimble in its efforts to conserve water across the state.

Thank you for the opportunity for Trimble to provide comments on this public issue. I would like to offer the opportunity to present Trimble's suite of farm management solutions at your convenience.

Sincerely,



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Attachments:

2014 Trimble Agriculture Product Portfolio