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Testimony of Bradford A. Lange

I, Bradford Lange, do hereby declare:

I am a hands-on co-owner and operator of Diablo Vineyards, which is one of the companies associated with our family's winegrape growing and wine production operation known as Lange Twins. Our farm began with 125 acres, five generations ago. Our operation is 100 percent family run.

In all, our family owns about 1,400 acres, and manages 6,500 acres of winegrapes. We grow grapes in Lodi, the Clements Foothills east of Lodi, and the North Delta, north of Highway 12. In the North Delta, each year we produce approximately 12,000 tons of winegrapes, which produces over 2 million gallons of wine. Documentation of our riparian and pre-1914 water rights for our North Delta diversions, as well as other diversions associated with my family's farming operations, are on file with the SWRCB. (LAND- 54; see also LAND-4 and LAND-6.)

Lange Twins farms 1,600 acres of winegrapes within the north Delta, on Ryer Island, Pearson District, and Merritt Island. Our operation in the north Delta has been underway since 1984. The soils, elevation, good quality water supply, and microclimate (including Delta breezes) of the North Delta are excellent for winegrape growing. Varietals we grow in the north Delta include: Chardonnay, Pinot Grigio, Pinot Noir, Chenin Blanc, Muscat Canelli, Viognier, Petite Sirah, Cabernet, Merlot, and Sauvignon Blanc.

The winegrapes we grow in the north Delta have unique characteristics that make an important contribution to the wines that we produce. We market Delta winegrapes and wine to multiple customers in California, the U.S. and Internationally. We have customers that specifically request Delta grown grapes, including the Clarksburg appellation, for their wines.

It takes a significant investment to grow winegrapes. Our family has invested significantly in vineyards in the North Delta and plans to farm there generationally, given its beneficial growing environment and the availability of high quality water. In general, 1,600 acres of vineyards represents \$24,000,000 in today's dollars, not including land costs. In my opinion, land costs alone are at least \$16,000 per acre. Thus, it takes many years to reap a return on investment. While we are not thinking of expanding at this time, I note that many wine producers are expanding operations in the Delta due to the favorable growing conditions.

In my decades of experience in growing winegrapes, I have observed that grape vines do not have a high tolerance for salt. Saltier water negatively affects quality and yield. If there is widespread vine collapse, that could put us out of business. Our vineyards depend on high quality Sacramento River water, which is also conveyed through Duck Slough, Steamboat Slough and Snodgrass Slough, where our diversions are located. If Sacramento River freshwater flows are significantly reduced, as shown in the modeling assumptions (e.g., DWR-515; see also DWR-5 Errata slide 25), our water quality would become more saline. Nonfarmers without expertise in agronomy and/or viticulture, may believe that relatively small increases in average salt content would not interfere with our continued beneficial use of water under our water rights. (See, e.g., DWR-66, pp. 4-6 (discussing 18-19% increase in EC at Emmaton in July and August for all scenarios). Although model results for Ryer Island were not made available to us (see LAND-72 [email from DWR refusing to provide requested outputs]), it is reasonable to assume that there will also be increases in salinity at Ryer and our other vineyards if the Tunnels are built and operated.

Over time, increased salinity—even incremental increases—is a real concern for our operation. Today, we have very few situations where localized salinity buildup leads to burnt leaves and little or no crop in our Delta vineyards. We depend upon rain and good quality irrigation water to leach the soils of the salts that can accumulate over time.

We have experienced some issues with salt intrusion on the southern end of Ryer during recent drought years, which are part of the existing hydrologic cycle. We monitor water quality, and to date have not seen significant damage to vineyards from salt. The water table on Ryer is high, about five feet below sea level. We have installed a tile drain system on our Ryer Island vineyards, and also expanded our drainage system to improve growing conditions for our vines. Currently, higher flows in the winter help flush out salts that may accumulate during dry years.

In the long term, we believe the amounts of water that would be diverted in the Tunnels would seriously impair our ability to continue exercising our senior water rights and producing high quality grapes in the north Delta. In particular, we are concerned that the diversions

would impose permanent drought conditions in the northern Delta. This would interfere with our operations and our water rights. Thus, we respectfully request that the Hearing Officers protect sustainable Delta agriculture and our water rights, and deny the Petition.

I declare under penalty of perjury under the laws of the State of California that the foregoing statements are true and correct.

Executed on the 31st Day of August, 2016, at Acampo, California.

Bradford A. Lange