## **TESTIMONY OF WILLIAM "CHIP" SALMON**

My name is William Salmon. I reside at 7749 West Undine Road, Stockton, California. For the past five years I have been the manager of ABF Services, Inc. ("ABF") and I also own and lease other property in the South Delta which I farm separately.

As manager of ABF, I farm a piece of property at the east end of Grant Line Canal as indicated on Attachment "A." It is my understanding this property is riparian to both Grant Line Canal and Middle River. The crops on this property have included walnuts, grapes, beans, alfalfa, tomatoes and other row crops.

In the last few years, I have noticed an increasing and substantial damage to the crops resulting from salinity. This problem has been verified by representatives of the Ag Extension Service and by a laboratory analysis done by my fertilizer representative at John Taylor Fertilizer. Attachment "B" is a copy of the tissue analysis of the walnuts. It indicates acute chloride toxicity.

Attachments "C" and "D" are certain water quality sampling data from DWR for Middle River and Grant Line Canal, the two places from which I diverted water for this property. The Middle River data for 2002 shows EC levels in the 700 and 800 range for most of the year, especially in summer. The Grant Line Canal data (measured at Doughty Cut) shows EC in August was generally above 800 and sometimes 900. For the summer months in general, the level was most always above 700, though of course there were fluctuations. The EC objective at Vernalis for agriculture during the summer months is 700.

I have also attached some pictures as Attachment "E" which show some of the salt damage to the crops. Copies are difficult to view, but they do show the burned margins of the leaves and arrested growth associated with the salt damage.

The data for the damages in 2002 are as follows. The 105 acres of walnuts had a decrease in yield form 254,580 tons in 1999 to 105,380 in 2002 for the Payne variety and 85,420 tons in 1999 to 33,440 tons for the Westside variety. There was obvious leaf burn and stunted growth on the walnuts from the salts. Although the orchard would have to have been removed eventually due to a virus, it still should have had many more years of production left. However, I had to remove the orchard in 2002 because of the decrease in yield at a cost of \$450 - \$550 per acre which included tree removal, root removal and associated labor.

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The grapes are 47 acres of the Chardonnay variety. The sugar levels necessary to allow harvest for the contract I have were never reached, the grapes actually began to turn into raisins and the vines to defoliate. Although I did harvest some of them for juice, basically the entire crop was lost.

Beans were planted on 68 acres. The stunted growth of the plants was very obvious and the crop yield was one-half of other fields using the same seed and cultural practices. This acreage yielded 10 sacks per acre while the others were 20.

Although I have not calculated the current year's problems, the Chardonnay grapes are again stressed and will have a decreased yield and the young walnut tress I have planted which include the varieties of Tulare and Chandler are suffering from chloride stress.

To address this problem over the years I have applied soil amendments such as gypsum and have flooded the fields in winter to attempt to flush out the salts. However, the soil ph in combination with the salty water binds the chlorides and prevents leaching. The walnuts and grapes acreage are installed with tile drainage, but even that aid to drainage was inadequate.

If the water quality in the interior South Delta channels, including the Middle River near Old River compliance location was maintained at the 700 EC standard (April through August), the salt problems I am experiencing would certainly decrease and result in a direct economic benefit to ABF and associated parties. It is my personal belief that the State Water Resources Control Board should require DWR and USBR to comply with their respective permit conditions and meet the South Delta Water Quality Objectives.