These comments are in regard to Section 2, the Irrigated Agriculture section of the draft;

- P. 31 "Cover crops.... beyond the scope of this study"
- This would negate any accuracy as to the total N surplus P. 44 in perennial and permanent crops where permanent and semi permanent cover crops are prevalent. Though some may fix N such as Vetch or Alfalfa, most cover crops are Pasture grasses, they require additional N application above rates in a bare floor. Even accounting for a clean crop row, cover crops may cover as much as 90% of the surface area in tree crops and vineyards. This cover crop may exist for the life of the orchard or vineyard, literally decades and represents significant N nutrient requirements. Back of the envelope calculations indicate there is much more acreage in pasture grass in in Orchard and Vineyard land than on Pasture land in the GWMA. To reiterate how does the WSDA report have any credibility without regarding total N surplus in Tree Fruit and Vineyards without taking into account the N requirements of cover crops?
- P. 31-32 By using crop consultants or agronomists in the survey along with actual farmers the WSDA mixed survey methods. Crop consultants make Recommendations and often are Not necessarily privy to actual rates of N applied. in the real world a consultant is actually more like a reference book than a farmer. Farmers weigh the recommendation with their own experience and the significant financial implications of wasted N application of more than they need. Often they apply less. By mixing Consultants with Farmers in the survey the WSDA Negates the validity of the survey and would have saved money and time, by just using the WSU Extension Fertilizer guidance publication for N application rates to GWMA acreage.
- P. 39 Though the WSDA admitted this is a "one year snapshot" it jumps to unfounded conclusions on P. 45 The WSDA table on P.39 would have us believe that some years Apple and Pear growers apply zero N but other kinds of tree fruit growers and vineyard operators do not? This leaves to erroneous conclusions as to which crops have higher N surpluses on P.45 Because of the nature of permanent and perennial crops ZERO should always be used as to the low range number of N applied. Remember the real world application of N compared to theoretical recommendations. Another example of failing to use ZERO where real world applications would seem to indicate otherwise is Pasture land. Much Pasture land is of secondary quality in the GWMA or the providence of "Hobby Farms." Commercial N is often an inconsistent application at best, especially in times of low Beef prices. Yet the WSDA would have

us believe that Pasture owners always apply at least 50lb.s of N. Again ZERO should be the low value.

Even assuming that the WSDA survey telephone methods are accurate, a big if. Real world farmers are going to not give much or any credence to the table on P.39, The sum of inputs and outputs on P. 43 or the Estimated total N Surplus on P.44-45 when the table on P.39 Exaggerates the weighted average of N applied. A one year snapshot is simply an wholly inaccurate picture of N application of many irrigated crops in the GWMA.

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