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Joe Grindstaff, Executive Director
Delta Stewardship Council
980 Ninth Street, Suite 1500
Sacramento, CA 945814

RE: Agriculture White Paper, December 6, 2010

Dear Joe:

As I indicated at the last meeting of the Delta Stewardship Council, I have some suggestions for improvement of the Agriculture White Paper which was discussed at that meeting.

Generally speaking, I think the paper, while heavy on statistics, fails to capture the history and importance of the agricultural development of the Delta. This could be accomplished by making the following revisions: [Except as noted, the comments will not be made with reference to page and line because of their general nature.]

1. The paper would benefit from a clearer and more thorough explanation of the original patenting of the Delta lands as "swamp and overflow lands" pursuant to the grant of the Delta area to the State under the Federal Arkansas Act. This program was parallel to the Homestead Acts which passed much of the lands in the Southwestern United States into private ownership in small acreages to accomplish the ideals of the agrarian society which were then widely held. Although the original acreage limitations were successively expanded in order to meet the economic realities of levee building, the original grants at \$1 per acre (refundable upon evidence of reclamation works) were clearly intended to

extend farm ownership to western migrating families and/or veterans. The initial attempts to reclaim lands in the lower Delta were largely unsuccessful until the clam shell dredger became available, enabling river bottom sediments to be used for levee construction in lieu of peat soils. Reclamation Districts were formed to assist in the bond financing of the reclamation works which enabled numerous landowners to work together on the reclamation of a large island.

2. Almost all of the current Delta levees were constructed by 1910. Thus, the Delta as we know it today has existed behind levees for over a hundred years and the implication that changes have occurred "over the last century" is generally erroneous. Although the organic soils behind the developed levees have eroded and subsided in the interim, the farming practices have, generally speaking, remained the same. These nitrogen rich soils, subject to periodic catastrophic flooding, are largely farmed today as they were a hundred years ago; to wit: irrigating through flood gates or siphons by methods of sub-irrigation while maintaining farmable soil layers to a depth of 3 or more feet through on-island drainage ditches and canals with drainage waters returned to adjacent channels by pumping. Although substantial portions of the Delta uplands on the peripheries of the Delta have been converted to permanent crops (especially grapes, pears, and some walnuts), most of the lands continue to produce the same or similar crops. Originally, the Delta produced mostly potatoes, onions, alfalfa, wheat and other small grain crops. Specialty crops like canning tomatoes and asparagus came later. [Strangely, potatoes are not mentioned in the current draft. The common practice in the Lower Delta was to lease newly leveed lands to George Shima who would clear, level and ditch the newly reclaimed lands with his considerable teams of horses and Chinese labor in return for 3 years rent-free to produce potatoes.]
3. At several points in the current draft, the statement is made that 313,000 acres of former wetlands were put behind levees . I believe this creates a misleading

impression. When the Federal Government surveyed the Delta and designated it as "swamp and overflow lands" most of the land lay above or close to sea level and was not considered tidal wetlands. You may wish to contact George Basye, formerly of the Downey, Brand law firm, who has made quite a study of the distinction between swamp and overflow lands and tidal wetlands in the Delta. The significance of this, in my mind, is that the changes which occurred through reclamation are not as significant as intimated because of agricultural practices undertaken after reclamation, which included seasonal flooding of harvested crop lands for weed suppression and salt removal, were not radically altered. And, in fact, most of the historical surveys of both fish and avian population in the Delta indicate that healthy populations of anadromous and other native and introduced fishes as well as water fowl and other migratory and native birds continued to exist in the Delta for many generations after reclamation was essentially complete.

4. Farming in the Delta actually conserves water. Evapotranspiration from water surfaces in the Delta exceeds 5 feet annually, whereas crop irrigation, especially through sub-irrigation which does not flood the surface, consumes 3 feet or less, depending upon the crop. Thus, if the agricultural lands were flooded, more fresh water would be consumed. In addition, phreatophytes (tules, hyacinths and other water loving plants typical of flooded lands) generally consume about 8 feet of water.
5. In Section 6, page 6-4, the paragraph entitled "Water Supply" is generally inapplicable to the Delta. The ground water generally available underlying Delta soils is of unsuitable quality for use either as irrigation water or human consumption.
6. Also, in Section 6 ,at page 6-3, in the paragraph entitled "Water Quality" agricultural run-off is identified as "one of the main sources of water and soil

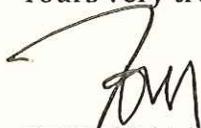
contamination in the Delta.” While this may be true, the source of the contamination is typically upstream of the Delta from ocean salts exported to the San Joaquin Valley by the Central Valley Project, native soil constituents leached from the irrigated lands of the San Joaquin Valley (including selenium and boron), and chemicals added in agricultural and urban uses, and drained into the Delta through the San Joaquin River. Because of the high nitrogen content of the native Delta soils and the lack of conditions suitable for tree and vine crops, many of the fertilizers, herbicides and pesticides found in the waters of the Delta are contributed elsewhere. The same criticism applies to the text found in Section 5, from page 5-2 line 26 to page 5-3 line 5.

7. Some emphasis is placed on the value of crops exported from California with implied criticism that the Delta is not generating crops for export. In actuality, there is a net demand for most of the crops grown in the Delta within the State of California, thus accounting for the relative lack of export. In this day and age, growing crops that you actually need in your area might be considered admirable.
8. The discussion of the relationship between the five Delta Counties’ General Plans and the responsibilities of the Delta Protection Commission seem contradictory. The facts are that the land use plan adopted by the Delta Protection Commission is incorporated, in effect, by each of the Delta Counties, thus constituting regional planning on a Delta-wide basin.
9. In Section 6, at pages 6-2 to 6-23, in paragraphs entitled “Subsidence” and “Levee Failure” dire predictions are made for levee failures. In fact, since the State instituted a program of cost-sharing for Delta levee maintenance and rehabilitation, the incidence of catastrophic levee failures in the Delta has been noticeably reduced. Much of the organic soil in the Delta has already been

eliminated by oxidation and wind erosion, greatly reducing in area the portions of Delta islands which continue to subside. Seismic failures are unknown and are speculative at best. Sea level rise began to occur according to records compiled over the last 100 years and levee maintenance and rehabilitation appear to have more than kept pace with it. This paper, along with much of the other information promulgated by the Dept. of Water Resources, paints an overly grim picture of the ability of the Delta to overcome natural forces, especially when viewed against the experiences of the Netherlands where there is a real determined effort to adjust to the same conditions.

10. The Paper needs to recognize to a much greater extent the fact that the Delta provides an almost unique example of integration of agricultural, recreational, environmental uses, unlike almost any other agricultural area in the Western United States at least. The legacy communities, as well as the growing populations and the large urban areas close by the Delta, make the Delta an economic engine and recreational resource which may be irreplaceable, especially when considering the network of transportation and utility corridors constructed through the area.

Yours very truly,



THOMAS M. ZUCKERMAN

TMZ:csf