



Via email: climatechange@deltacouncil.ca.gov

March 16, 2021

Harriet Ross, Assistant Planning Director
Delta Stewardship Council
980 Ninth Street, Suite 1500
Sacramento, CA 95814

Subject: Stockton Coalition Comments on *Delta Adapts Vulnerability Assessment* and associated technical memoranda

Dear Assistant Planning Director Ross:

Restore the Delta (RTD) is a grassroots campaign of residents and organizations committed to restoring the Sacramento-San Joaquin Delta so that fisheries, communities, and family farming can thrive there together again; so that water quality is protected for all communities, particularly environmental justice communities; and so that Delta environmental justice communities are protected from flood and drought impacts resulting from climate change while gaining improved public access to clean waterways. Ultimately our goal is to connect communities to our area rivers and to empower communities to become the guardians of the estuary through participation in government planning and waterway monitoring. RTD advocates for local Delta stakeholders to ensure that they have a direct impact on water management decisions affecting the well-being of their communities, and water sustainability policies for all Californians.

We once again thank the Delta Stewardship Council (DSC) for partnering with RTD, Little Manila Rising, Fathers and Families of San Joaquin, and Third City Coalition to produce the “Delta Adapts Vulnerability Assessment Findings: Virtual Community Workshop” on Thursday, February 4, 2021. In this event, our groups’ youth climate water leaders presented various findings and critical observations from the DSC’s Vulnerability Assessment (VA).

To have the DSC take a leadership role among state agencies involving young people in climate change issues is so important: Today’s young people will deal with climate change effects and adaptation issues throughout their adult lives this century. Involving them now, getting their ideas, concerns, and recommendations is crucial for assessing the Delta’s vulnerabilities accurately and equitably. It is the soundest basis for developing sound adaptation strategies that benefit especially the environmental justice communities of the Bay-Delta Estuary and the city of Stockton.¹

We also thank the DSC for extending the time period for receiving public comment by four weeks.

This comment letter incorporates many of our groups’ comments from presentations given on February 4, 2020. In this cover letter we provide general comments about the vulnerability assessment, and provide specific, detailed comments on the assessment and its associated technical memoranda in Attachment 1.

General Comments

While we believe this attention to climate change adaptation and hazard vulnerability in the Delta is overdue, it is always a good time to do the right thing. The Council’s work in this regard is commendable, and we deeply appreciate your efforts. Our organizations are also grateful that the Delta Stewardship Council has reached out to our communities to engage, to use the assessment to build viable and meaningful climate adaptation strategies for the Delta.

We detect a lack of clarity about the Delta Adapts process’s policy basis in legislative and executive authorization. Each document in the Delta Adapts package² issued so

¹ While RTD is not a direct advocate for other environmental justice communities of the Delta (such as those in Pittsburg, Antioch, West Sacramento, Suisun City, and elsewhere), we hope the DSC will find our comments useful and applicable in developing and applying adaptation strategies that can be useful to and for these communities as well.

² By “package” we refer to the web pages, vulnerability assessment public review draft report, and the various technical memos and background reports issued by the DSC in December 2020.

far is uneven with respect to the others as to how this process is justified in law, and whether goals, purposes, and objectives are justified. We appreciate that the process is necessary and overdue, but state agencies need clear authorization for the actions they take, or else their actions are vulnerable to legal challenge. If there is a gap in policies to buttress the work undertaken, the DSC should acknowledge it and propose new or amended policies to close those gaps. We provide more specifics on this comment in Attachment 1 to this letter.

The DSC continues to fail to take seriously the state-legislated mandate to reduce reliance on the Delta for California's future water needs, as mandated in the Delta Reform Act of 2009. By ignoring this policy mandate, the DSC misconstrues in the VA its overall goal structure as simply a balancing of the coequal goals of ecosystem restoration with water supply reliability. But it is a clear mandate from the Act that analysis of water supply reliability must be recalculated to take account of reduced Delta reliance as a source of water for the state's future water needs, and thus must be analyzed in the Delta Adapts documents. "Reliability" must come to mean not increasing or maintaining exports at existing levels from the Delta, but using water more efficiently throughout the state to reduce actual demand on the Delta, not just a percentage of an exporter's total water portfolio. The VA at present spends many pages examining the impacts of climate change to the production of water in northern California reservoirs of the Central Valley Project and the State Water Project, rather than identifying the local and regional agencies that are not doing enough to reduce their demand (reliance) for Delta supplies. It also ignores the equity issue—that the Delta has shouldered much of the water supply burden for importing regions with insufficient recognition by state agencies generally, including the DSC—and that since 2009 reducing Delta reliance is state policy. This, we find, is the most serious and obvious analytical and policy blindspot in the vulnerability assessment so far.

The vulnerability assessment is nonetheless path-breaking in its scope and findings, and contributes greatly to the Delta community's awareness of hazards and vulnerabilities to sea level rise, temperature increases, and water quality impacts from climate change. This is a precedent we celebrate. We were surprised at how little exploration of social vulnerability indicators the DSC examined in its analyses, despite identifying social science factors as an expanding area of interest of the Delta Science Program in recent years and engaging with hundreds of experts from many fields in preparing the vulnerability assessment. Again, we provide some specifics in Attachment 1. The mapping tools created by the DSC to accompany the vulnerability assessment are certainly user-friendly, and we present a brief exploration of them in Attachment 2 to this letter.

Since we are commenting on a draft report, we respectfully suggest for the upcoming final report outlining areas where adaptation strategies for the Delta will be most needed, as well as potential legislative and policy initiatives that push forward climate change mitigation that will result in “no regrets” for the Delta region as well as other parts of the Central Valley and California. This will provide useful stepping-stones to a successful adaptation strategy phase of the Delta Adapts process.

The final version of this vulnerability assessment should also clarify what existing services, practices (e.g., flood fighting), and infrastructure are already available to Delta communities as a baseline for adaptation strategies. How prepared are these baseline elements of disaster response for dealing with flood, extreme heat, wildfire, and other climate hazards at the different planning horizons examined in the assessment’s scenarios? The infrastructure maps provide a base of some information on this, but it seems insufficiently integrated with an analysis of adaptive capacity in the Delta.

Finally, we praise among the DSC’s “key takeaways” in the Executive Summary its finding that flood risk is among the most pressing threats to the Delta and that “anticipated flooding underscores the importance of continued, and potentially elevated, levels of investment in Delta levee maintenance and improvements.” Foregrounding this finding as you have is a vital first step toward protecting life safety of environmental justice communities and the urban and rural infrastructure on which they depend. Later in the summary, the DSC states “we now know where the greatest climate impacts will occur to people places, recreation, agriculture, and infrastructure, and we understand the respective economic impacts” in the Delta. We find this reassuring—and yet we feel that the vulnerability assessment would do well to consolidate these direct findings succinctly in the Executive Summary. Right now, these findings are spread throughout the latter half of the vulnerability assessment. Still, we look forward to the Delta Adapts adaptation strategy phase, where we expect the DSC to craft strategies and policies that will address these findings and identify effective adaptation strategies and actions to protect Delta communities in our rapidly approaching future.

Conclusion

Restore the Delta welcomes your efforts to study, model, and develop findings about the sources and sites of risk from climate change throughout the Bay-Delta estuary. While overdue, it is never the wrong time to do the right thing. We welcome Delta Adapts as an important step in the direction of our region’s adaptation to California’s changing climate.

Thank you for the opportunity to comment, and for your consideration of our comments on the Delta Adapts Vulnerability Assessment. If you have questions about this letter, contact Barbara Barrigan-Parrilla (209-479-2053, or barbara@restorethedelta.org) or Tim Stroshane (510-847-7556, or tim@restorethedelta.org). We look forward to working with you on Adaptation Strategy development in Phase 2.

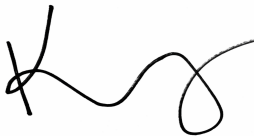
Sincerely,



Barbara Barrigan-Parrilla
Executive Director
Restore the Delta



Tim Stroshane
Policy Analyst
Restore the Delta



Kimberly Warmesley
Councilmember, District 6
City of Stockton



Nicholas Hatten
Executive Director
LGBTQ+ Social Justice Initiative



Tama Brisbane
Executive Director
With Our Words, Inc.



Dillon Delvo
Executive Director
Little Manila Rising



Nathan Werth
Co-Founder
Substratum Systems



Irene Calimilim
Health & Environmental Justice Programs
Manager
Fathers & Families of San Joaquin

Jasmine Leek, signed via email
Managing Director
Third City Coalition

Darryl Rutherford, signed via email
Executive Director
Reinvent South Stockton Coalition

Attachments:

1. Specific Comments on the Delta Adapts Vulnerability Assessment and Technical Memoranda
2. Stockton Area Delta Adapts Vulnerability Indicators

cc: Susan Tatayon, Chair, Delta Stewardship Council
Frank C. Damrell, Jr., Member, Delta Stewardship Council
Maria Mehranian, Member, Delta Stewardship Council
Don Nottoli, Member, Delta Stewardship Council
Daniel Zingale, Member, Delta Stewardship Council
Christy Smith, Member, Delta Stewardship Council
Kathryn Phillips, Sierra Club California
Brandon Dawson, Sierra Club California
Molly Culton, Sierra Club California
Sejal Choksi-Chugh, Executive Director, San Francisco BayKeeper
Jon Rosenfield, Senior Scientist, San Francisco BayKeeper

Attachment 1
Specific Comments on the
Delta Adapts Vulnerability Assessment and Technical Memoranda

Delta Adapts Vulnerability Assessment (VA)

- *Purpose, pp. 1-1 through 1-3:* In this section, a reader expects to see the legislative and executive authorizations that justify DSC's conduct of the Delta Adapts strategy process. Four presumed authorizations are listed on page 1-2: a phrase that appears in the Delta Reform Act of 2009 uncited, reference to the Delta Plan, and two executive orders (B-30-15 and N-82-20) by Governor Jerry Brown and current Governor Gavin Newsom. The VA claims in the first bullet point that the Delta Reform Act mandates consideration of "the future impact of climate change and sea level rise" in restoration planning and identifies a restoration planning horizon of 2100." The quoted phrase is apparently from California Water Code section 85066, which is part of the definitions section of the Act, and is confined to the definition of "restoration" and its usage in the Act. Section 85066 reads as follows:

85066. "Restoration" means the application of ecological principles to restore a degraded or fragmented ecosystem and return it to a condition in which its biological and structural components achieve a close approximation of its natural potential, taking into consideration the physical changes that have occurred in the past and the future impact of climate change and sea level rise.

Read in context, it is a stretch to interpret Section 85066 as reflecting a mandate for doing a climate change vulnerability assessment for the Delta. In context, it applies only to a definition of the considerations the DSC is to apply to restoration policy and projects.

Searching the Delta Reform Act for "climate change" yielded only two other references in the Act. Section 85307 authorizes the DSC to work with CalTrans to ensure the Delta Plan takes account of impacts of climate change on road and bridge infrastructure in the Delta. Section 85320(b)(2)(C) addresses criteria by which the Bay Delta Conservation Plan would have been incorporated into the Delta Plan, and climate change was an element of a required analysis that had to be performed to accomplish this. However, because the BDCP has been defunct since 2015, this section appears to be moot.

The authorization to produce and approve a Delta Plan is a logical place to find authorization, it seems to us. At least two sections of the Act relating to the Delta Plan seem to us to apply:

85300(a)...the council shall develop, adopt, and commence implementation of the Delta Plan pursuant to this part that furthers the coequal goals. The Delta Plan shall include subgoals and strategies to assist in guiding state and local agency actions related to the Delta. In developing the Delta Plan, the council shall consider each of the strategies and actions set forth in the Strategic Plan and may include any of those strategies or actions in the Delta Plan. The Delta Plan may also identify specific actions that state or local agencies may take to implement the subgoals and strategies.

The Act directs the DSC to consult with a variety of state and local and federal agencies in developing the Delta Plan. The Plan is intended to be a living document that the DSC updates every five years. Further in, the Act requires the DSC to “*protect, enhance, and sustain* the unique cultural, historical, recreational, agricultural, and economic values of the Delta as an evolving place, in a manner consistent with the coequal goals” of Delta ecosystem restoration and water supply reliability. Moreover, all of the tasks identified for the Delta Plan in Water Code Section 85302 can be put to use to address climate change stresses and threats (see especially Water Code sec. 85302(c)(4). While there are sparse authorizations to take account of climate change, the Act does provide that the Delta Plan needs to be adaptable and responsive to changes in threats and stresses from whatever source they may arise. To us, that seems sufficient legislative authorization for the Delta Adapts process, given that climate change impacts on the Delta clearly pose both increased threats of flooding from sea level rise and extreme storm runoff and increased stresses from higher temperatures and longer and more frequent droughts degrading water quality and increasing potential for more harmful algal blooms.

To make this authorization more explicit, we respectfully suggest you recast the remainder of the Delta Adapts adaptive strategy phase as a Delta Plan amendment (which may entail amendments to each or most chapters of the existing Delta Plan). This way, too, Delta vulnerabilities and adaptation strategies would be incorporated into criteria governing covered actions and their regulation.

- *Resilience Goals, pp. 1-6 to 1-8.* We think it is wise to adapt the Bay Conservation and Development Commission’s resilience themes as a way of organizing the

authorizations for the DSC to move forward on climate adaptation strategies for the Bay-Delta Estuary. It was in this section that we found some of the legislative authorizations we looked for in the “Purpose” section. There were some areas where resilience goals were put forward without having a legislative basis. These included:

- “Restore critical physical and biological processes; connectivity; complexity and diversity; redundancy; at large scales with a long time horizon in mind.” (fifth bullet, p. 1-7);
- “Increase the resilience of Delta communities, especially those with characteristics that make them more vulnerable to climate risk...” (eighth bullet, p. 1-7). Is there a meaningful difference between protecting and sustaining Delta legacy communities (as called for in the Delta Reform Act) and “increasing the resilience of Delta communities”? The former phrase from the Act can be interpreted to include resilience, since resilience connotes both protection and sustaining of the thing that is to be made resilient to shocks or disruptions. By thinking through this relationship, we respectfully suggest that the DSC could connect one of the major Delta Plan policies with climate resilience goals suggested in this section.
- The DSC received the Delta Protection Commission’s Delta Economic Sustainability Plan in 2011. This plan already addresses many of the ideas contained in the first economy bullet (“Maintain and improve local economic vitality and access to diverse employment opportunities by preserving and growing, where appropriate, key economic and employment drivers and associated infrastructure that support the Delta economy and communities.”) We recommend the DSC revisit the Delta Economic Sustainability Plan for analysis and authorities supporting this bullet.
- Again, the second and third “Economy” bullets (p. 1-8) could be tied to Delta Plan legislative objectives contained in the Delta Reform Act.
- Finally, the first three and final “Governance” bullets can all find authorizing language in the Delta Plan and the DSC’s role in reviewing and seeking consistency of local and regional plans with the Delta Plan, and in its role determining consistency of covered actions by any state, local or private entity, the DSC is positioned (provided it has amended the Delta Plan) to give enforcement power to resilience policies it identifies in Phase 2 of the Delta Adapts process. It can use this role pro-actively—meeting in advance with parties

that would file covered actions in order to orient them to the goals and policies of the Delta Adapts process and iron out potential conflicts—not just as the DSC’s discretionary power over covered actions.

Both the “purpose” narratives and “resilience goals” are similar enough in putting forward the DSC’s intentions with the Delta Adapts process that they should be unified into one section of the VA and provided with legislative citations to shore up the DSC’s justification for undertaking the Delta Adapts process.

- *Existing Conditions Summary, pp. 2-1 through 2-9: The DSC has omitted an analysis of what local water agencies (mainly south of the Delta) that have been depending on Delta-sourced water have done to increase their local and regional water self-sufficiency so as to reduce their reliance on the Delta for California’s future water needs.* The Act mandates that:

The policy of the State of California is to reduce reliance on the Delta in meeting California’s future water supply needs through a statewide strategy of investing in improved regional supplies, conservation, and water use efficiency. Each region that depends on water from the Delta watershed shall improve its regional self- reliance for water through investment in water use efficiency, water recycling, advanced water technologies, local and regional water supply projects, and improved regional coordination of local and regional water supply efforts.

(Water Code Sec. 85021)

Omission of this policy characterizes almost the entire corpus of the Delta Adapts vulnerability assessment. Any amendment of the Delta Plan, and the Delta Adapts process, must take account of this state-legislated mandate. It means at a minimum that the efforts of local and regional agencies reliant on Delta water imports must improve its local and regional water self-sufficiency through a variety of means, but excluding Delta imports. The purpose and meaning of the policy is to take pressure off the Delta as a source of water for California’s future water needs.

This gap in the VA report takes on greater importance in our comments on flood modeling results below.

- *Flood Hazard Analysis, pp. 4-27 through 4-34: These maps reflect a scenario in which the flood risk along the San Joaquin River corridor grows throughout the 21st century and the governmental and public response—such as increased*

levee investments, and expansion of floodplain capacity to absorb flood flows, among other responses—would be ignored. The maps represent the implications of ignoring Delta flood risk. Consequently, as the flood risk grows, it appears that the San Joaquin River corridor from Vernalis well past Stockton will flood readily by 2050, and that the Old River corridor will see extensive flooding by 2030—just nine years from now. Flood risk to Stockton’s drinking water diversion and treatment plant at Disappointment Slough on Empire Tract appears to be threatened by 2050. These maps require that we ask, who is at risk should such floods occur? We have pulled together screen shots of the Stockton Area’s vulnerability indicator maps. There are fifteen indicators in all, and we include them in Attachment 2 to this letter.

- *Delta as an Evolving Place*, pp. 4-35 to 4-37, including Figure 4-5, *Social Vulnerability in the Delta*. Figure 4-5 appears to be a faithful reproduction of the geography of social vulnerability as estimated by the DSC. We note that the mapping tool online³ uses a different coloring scheme for the data as is reproduced in Figure 4-5, which can be a little confusing. However, no summary of the equation used to calculate the estimate, nor any reference to an associated technical memorandum is provided here, and should be.⁴ This also would have been a logical place to briefly summarize vulnerability indices in the cities of the west Delta, the Stockton Area, and the towns along the Sacramento River in a few of pages, perhaps with a couple of maps, but no such summary appears.
- *Section 2.2, Asset and Resources Inventory and “Assets and Resources,”* pp. 4-38 to 4-39: We find the DSC’s use of the category of “asset” applied to “people” offensive. We noted this usage initially in Section 2.2 where people and population are listed as an asset, in addition to places, parcels, buildings, and businesses (like parks, campgrounds, marinas, etc.). It is offensive because the DSC has not taken care to adequately define what it intends and means by use of “assets” in the context of the vulnerability assessment. In addition, the term “asset” is routinely associated with property or liquid finances—things that can be converted to cash via sale on the market. However, people are not property. We think the DSC can fix this problem with its usage of “assets” by clearly defining what it means by this term, and distinguishing “assets” from people and population. Then make “people and population” their own separate category. Emergency managers regularly speak of the purpose of disaster preparation and response as matters of protecting “life and

³ Accessible at https://deltascience.shinyapps.io/Delta_vulnerability_map/.

⁴ We found discussion of the DSC’s methodology in the Equity Technical Memorandum, but this is not mentioned in the “Evolving Place” passage of the vulnerability assessment.

property,” and the vulnerability assessment would benefit from adopting this clear distinction. The DSC’s usage should follow this to facilitate clearer communication across agencies and with the public.

- *Section 4.4.1, Ecosystem Asset Types, pp. 4-39 through 4-43:* The DSC applies “asset” terminology to ecosystems here as well. Does “asset” in “ecosystem asset types” really add meaning to discussing the variety of ecosystems that would be affected by sea level rise and other climate impacts? Does not “ecosystem type” really capture what you’re describing in Tables 4-6 and 4-7? The various species that make up an ecosystem are also not themselves property, even if parceled land may be treated as such. Calling ecosystems “assets” similarly strikes us as offensive, unnecessarily, and probably unintentionally so. We ask again that the DSC clarify what it means by applying “assets” in this context, and if possible, please reduce the scope of its application in the vulnerability assessment.
- *Section 5.1.4, Flooding, and Figure 5-1:* First, we think this figure should have covered a full page to make it more evident where the various influences affect cities, towns, and other areas of the Delta. The dots are so large in places relative to the underlying geography that it is difficult to associate influences with familiar places. Second, this figure, and the discussion above it on page 5-4, we found intriguing, and left us with additional questions. What was the origin of the data points shown in the map?⁵ What criteria were used to distinguish one set of nodes as “riverine” from “transition” and from “SLR [sea level rise]” influences? We certainly grant, as the DSC states on this page, that “climate change stressors that will drive flooding and vulnerability [are] important for adaptation planning and future monitoring of climate changes in the Bay and Delta watersheds.” But where else in the vulnerability assessment have these categories been brought to bear in making determinations about risk, sensitivity, and vulnerability in the Delta? Are Stockton Area neighborhoods’ flood risk and vulnerability affected by a combination of both riverine and transition level rise, or just riverine influences? We cannot quite tell from this map in its current size. This is important, we agree, because it may affect what investments and adaptations must be planned for in the near future to prepare Stockton neighborhoods from increasing flood risks. We presume other communities in the Delta would have similar questions and concerns, such as Rio Vista, Isleton,

⁵ We presume that they were probably derived or characterized from the nodes of the flood models which DSC staff employed. These we found in the Flood Hazard Technical Memorandum illustrated in various ways in Figures 2-1, 3-1, 3-2, and 4-1. Figure 5-1, p. 5-1 of this memo, presents the same map, only smaller.

Discovery Bay, and the smaller towns along the “transition” corridors identified in this map.

- *Chapter 5, Vulnerability Assessment Key Findings:* We found helpful the infographics summarizing effects by 2050 that were presented on pages 5-9 (People), 5-15 (Places), 5-24 (Agriculture), 5-31 (Recreation), 5-34 (Infrastructure), 5-43 (Ecosystems), and 5-50 (Water Supply). They distill the essential takeaways of the lengthy discussions that occur in most sections of the Key Findings. We were puzzled why on page 5-9, the People infographic cites “25+ extreme heat days in urban areas of Stockton and Tracy” differs from the Ecosystem infographic on page 5-43 which states (for an “air temperature” icon) “16 to 29 Extreme heat days per year will adversely impact species survival.” Why aren’t these two separate infographics the same? Is it because Stockton and Tracy are on the Delta’s periphery and receive less coastal breeze influence, have urban heat island effects, or is there some other reason?
- Section 5.4, Water Supply Reliability, pp. 5-49 to 5-56: This section fails to acknowledge that the Delta Reform Act requires that California reduce reliance on the Delta for California’s future water needs. See our discussion of this issue above relating to Section 2, the Existing Conditions summary. If anything, the likelihoods that exports are expected to decrease 10 percent in average water years, 20 percent in drier years, Delta exports fall below 4 million acre-feet every four years or so, and that north of Delta storage decreases by a million acre-feet yearly are all reason enough that **the DSC should embrace the reduced Delta reliance policy as an important climate impact preparation tool as it moves into the adaptation phase of this process. Time is of the essence: Delta-reliant communities must be educated to prepare for a future that the Delta will not provide the water supplies it used to provide.**
- *Chapter 6, Conclusions:* We found the conclusion section inadequate for failing to summarize adequately the impacts to people in the Delta. The infographics provided in Chapter 5 went unused in preparing the summary conclusions of the vulnerability assessment. It could have been used here and in the Executive Summary.

Equity Technical Memorandum

- Section 1.3, *Climate Change Stressors and Hazards*, pp. 1-3 to 1-12: “Drought” is included among the climate hazards to face the Delta. However, Section 1.3 of the

Equity Memo omits any discussion of it. This is surprising and disappointing since the California Department of Water Resources release a 2020 study of small community water systems, including a useful mapping tool, that details the geography and sizes and small community water systems throughout the Central Valley, including the Delta. This study is briefly described and summarized in the DSC's Water Supply Memo, but it also needs to be analyzed in the Equity Memo. These water systems fulfill local water supply needs, likely for many rural, low-income communities of color including those residing in mobile home parks. In so doing, they help secure for these communities the human right to water. The state's human right to water law requires that all state agencies' planning efforts take account of the human right to water being met. So far the Delta Adapts vulnerability assessment fails to analyze the human right to water adequately.

- *Section 1.4.4, Data Gaps, p. 1-26:* We thank the DSC for recognizing that there are “many vulnerable populations that are not well captured by existing indices and indicators,” including homelessness, gender identity, and sexuality, neither of which are tracked by the U.S. Census nor the American Community Survey. This is a major data gap. The intersectional character of these elements of individual and community identities is critical to determining sensitivity of these populations, mapping their presence to exposures, and accurately assessing their vulnerability. They are often associated with other indicators due to the lack of housing and to discrimination. We urge the DSC to redouble its efforts to locate and apply data sources that would help close this data gap, and to carry them forward when developing the Delta Adapts adaptation strategy.
- *Section 2.1, Equitable Engagement, p. 2-29:* In the middle of this page, the DSC summarizes “complementary planning initiatives” by several Delta local governments that are engaged in climate change resiliency planning. The DSC states of these initiatives that “The opportunities to engage with stakeholders and members of the public through these complementary planning initiatives an projects are not likely to align with the Delta Adapts phases of work and are not expected to occur at the same frequency and depth as the Council’s direct communications with DBOs and service providers....The Council will seek to provide meaningful information about Delta Adapts to assist participants in understanding how it relates to, and some cases could inform, the complementary initiative.” It is unclear what this page is really saying. Are there gaps in state planning law that the DSC hopes to address in contacts with local governments?
- *Section 2.4.3.4, Mobile Home Park Communities, pp. 2-34 to 2-35:* As we noted above, there is a likely intersection between mobile home parks and small community

water systems. Clean, potable fresh water is critical to the resilience of small communities residing in mobile home parks and other rural settings. The Equity Memo has omitted discussion of this connection, and we respectfully urge that the DSC's final vulnerability assessment provide this analysis. We believe the data exist in DWR's 2020 Small Community Water Supply study to enable this analysis to occur. Also, where will the DSC's vulnerability assessment evaluate exposure of mobile home parks to flooding?

- *Section 3.1, Socially Vulnerable Communities, Figures 7 through 10, pp. 3-36 to 3-42:* We found the maps in Figures 7 and 8 helpful and interesting for highlighting vulnerabilities generally and for focusing on health indicators mapped onto the Delta. It is not explained why the 70th percentile was chosen as a threshold of vulnerability for this analysis. This could mean that areas with relatively low populations may be considered at somewhat lower risk or lower vulnerability to exposures. The DSC's explanation of why 70th percentile was chosen is omitted, so we cannot determine if the maps in Figures 7 and 8 accurately present and describe social vulnerability in the Delta. Another problem with these two figures is that they say nothing about what specifically what mix of vulnerabilities are involved with each color; they aggregate apples and oranges as fruit, so to speak, but do not offer insights into what mitigations might be appropriate in each area's case.
- Figure 9 summarizes the counts of social vulnerability index scores of census block groups. Why was an index score of 3 not included with the "high" designation of vulnerability rather than the "moderate"? What was the criterion for this threshold? The potential for intersectional risk categories increases dramatically from two to three, so it strikes us that this unexplained categorization probably understates the level of high social vulnerability in the Delta and would likely the final map presented in Figure 10 to show more areas of light orange, rather than the pale tan for "moderate."
- *Page 3-41 (discussion of Stockton and Pittsburg vulnerabilities):* This discussion should be edited to indicate to lay readers exactly where these various block groups are located within Stockton and Pittsburg. By this we mean that the DSC should use familiar common names for the neighborhoods (technically known as "block groups") that are identified here. This would help make this analysis more readily useful to the public.
- *Section 3.2.2, Other Vulnerable Populations, p. 3-44:* The DSC commits here also to evaluating the "exposure of prisons and hospitals to flooding, extreme heat, and wildfires," and to this list we recommend the DSC also include "long-term care

facilities,” which include people in memory care, skilled nursing, and assisted living facilities. These facilities have in common with prisons and hospitals the fact that there are dense populations of people in group quarter settings, they are served by professional staffs, and each such population has special needs.

Water Supply Technical Memorandum

- We have already commented on the DSC’s omission of any discussion of the state mandate to that water importers reduce Delta reliance for California’s future water needs. The omission continues in this memorandum.
- We thank the DSC for including a section on Delta levees, since they are the primary means by which water transfers are conveyed from Delta inflows to export pumps. The literature review on pages 20-27, however, fails to state adequately what the basic levee issues are and how they are now addressed, and what may be done to improve them. Should levee heights be raised? Where? How high? What progress has been made to implement the DSC’s “Delta Levee Investment Strategy”? Have priority investments been made, since they should figure into an accurate description of what the level of exposure is to levee failure? How much more investment is needed, and where? Restore the Delta recently described a Delta Independent Science Board review of seismic risk in the Delta; how does their assessment figure into DSC’s analysis of the state of Delta levees? Our questions are intended to encourage the DSC to apply best available science in its planning efforts. We respectfully encourage the DSC to address these questions in the final body of vulnerability assessment documents.
- *Section 8.6.1, Risks to Small Water Suppliers and Rural Communities, pp. 44-47:* Figure 14 in this section begins to get at what we wish the DSC would have done in more detail with DWR’s 2020 small community water system survey, but could go much further, since there are many “dots” on this map that are not summarized for population counts. No race/ethnicity, poverty rate, language isolation, and other vulnerability indicators are cross-correlated with this map. Consequently, the extent of drought and sea level rise effects on these small community water systems for social vulnerability remain to be assessed, in our view. This is just the kind of information that the DSC could and should make available to the local governmental planning initiatives that were discussed above.