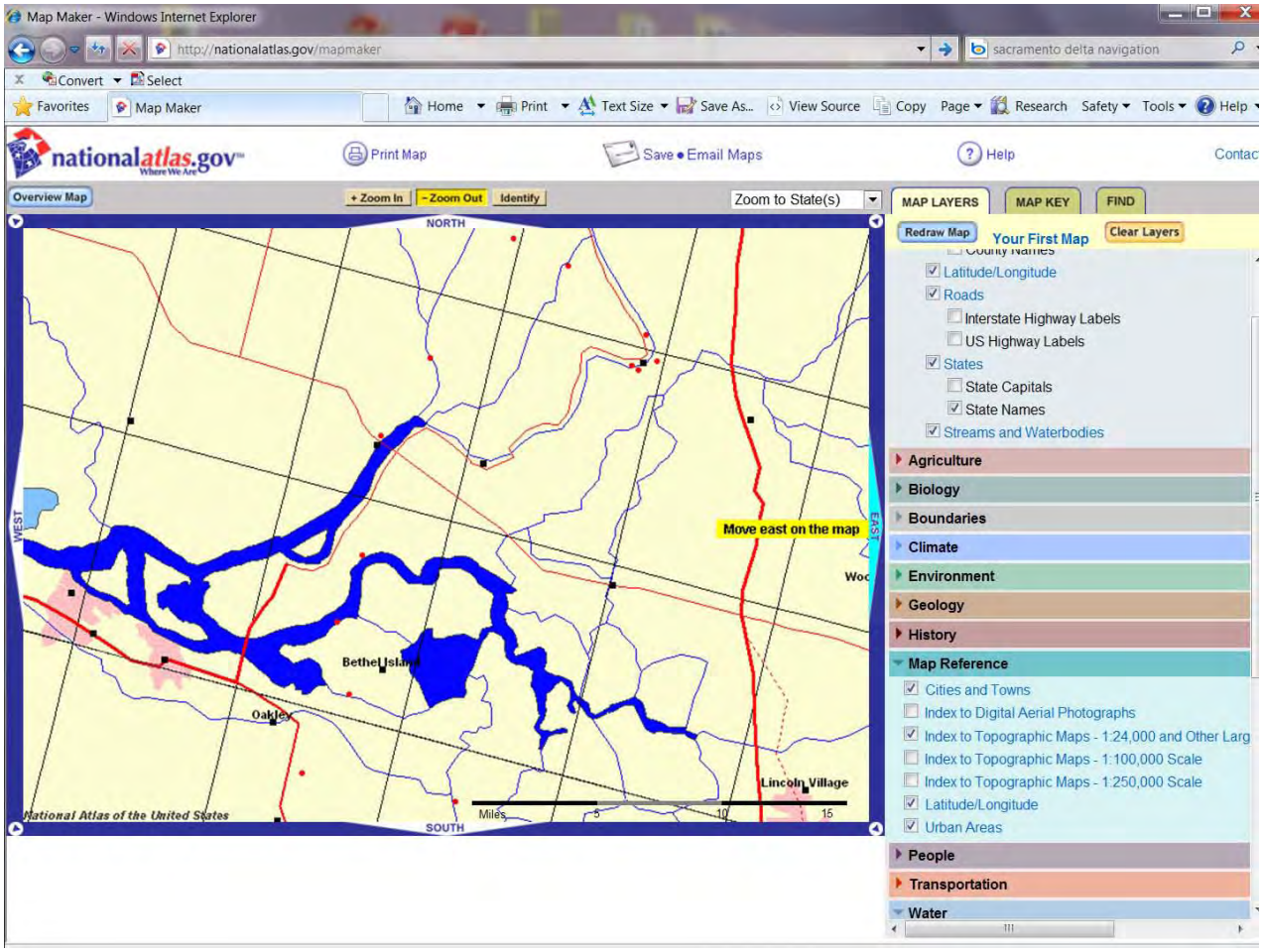
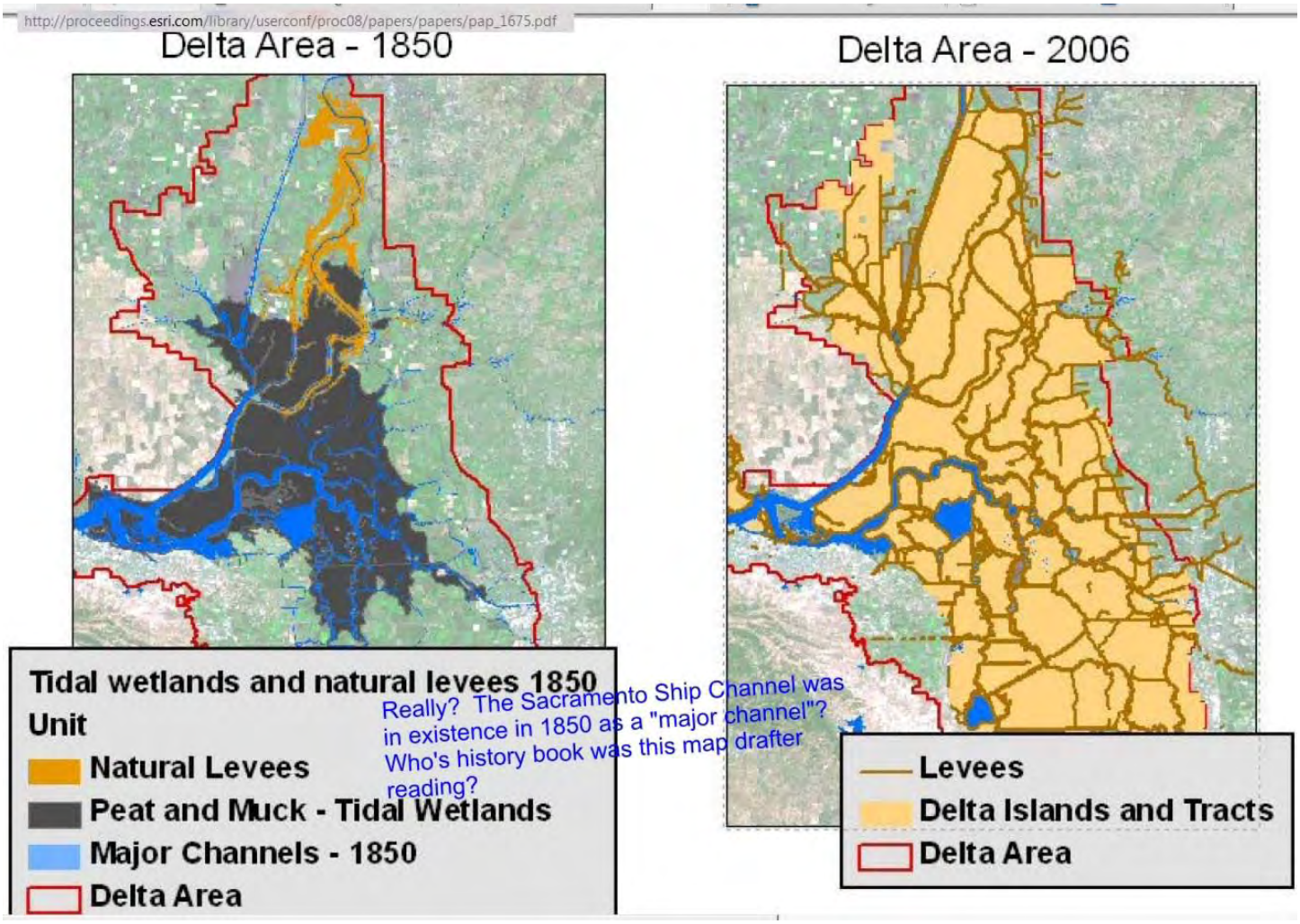
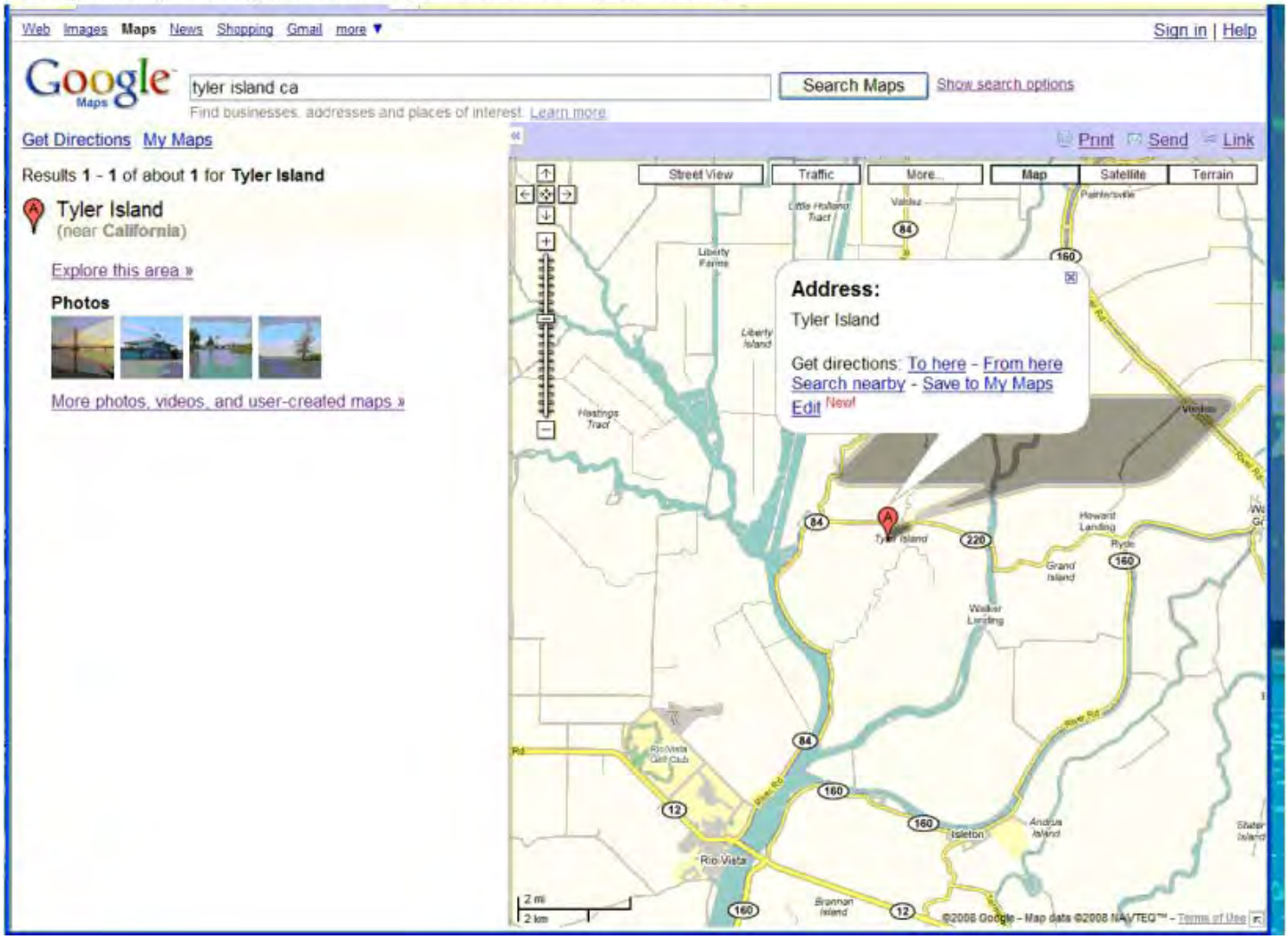


The current national atlas eliminates Sutter and Miner Sloughs. Why?

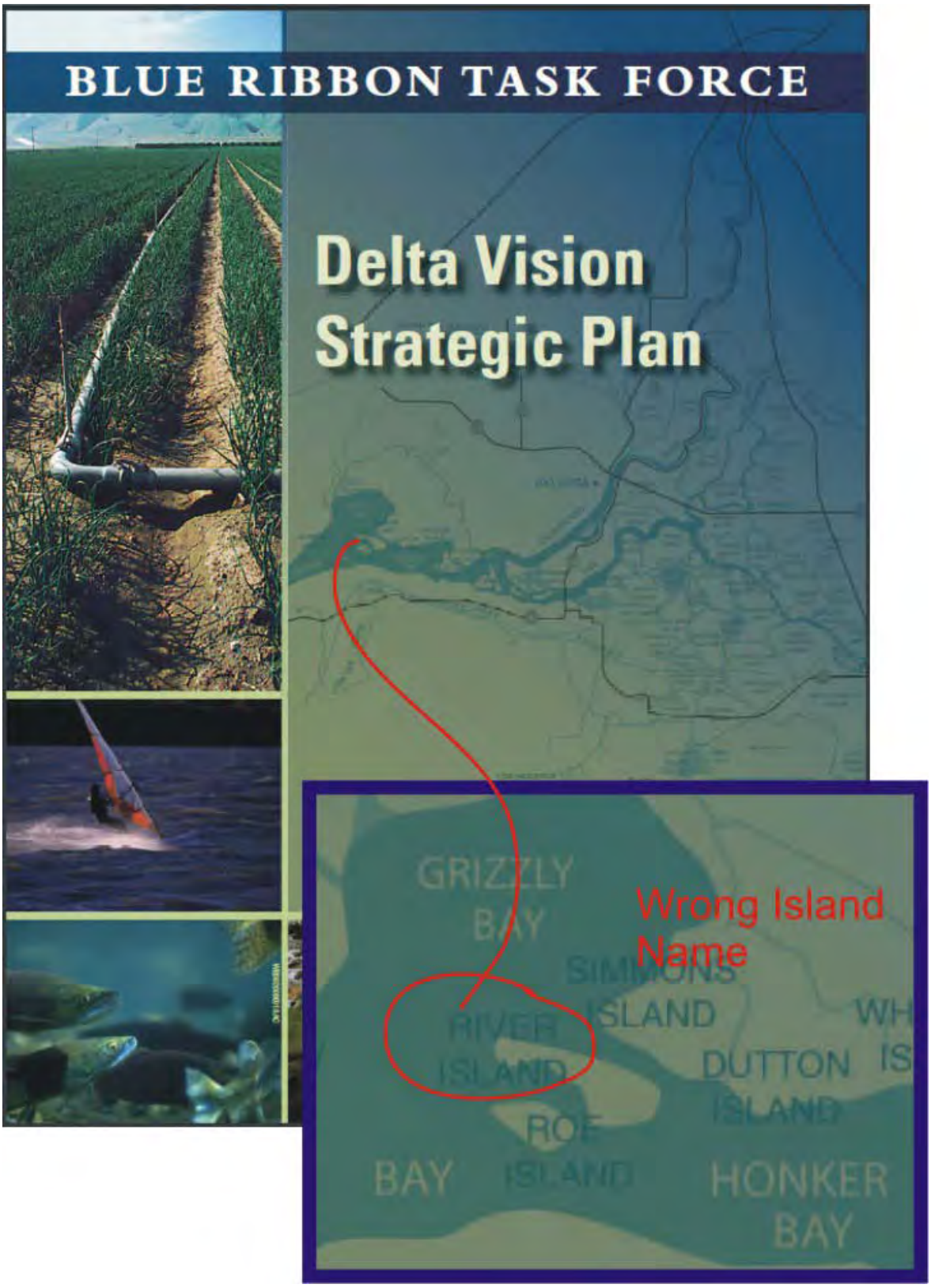


Another example of using graphics to convey false data.

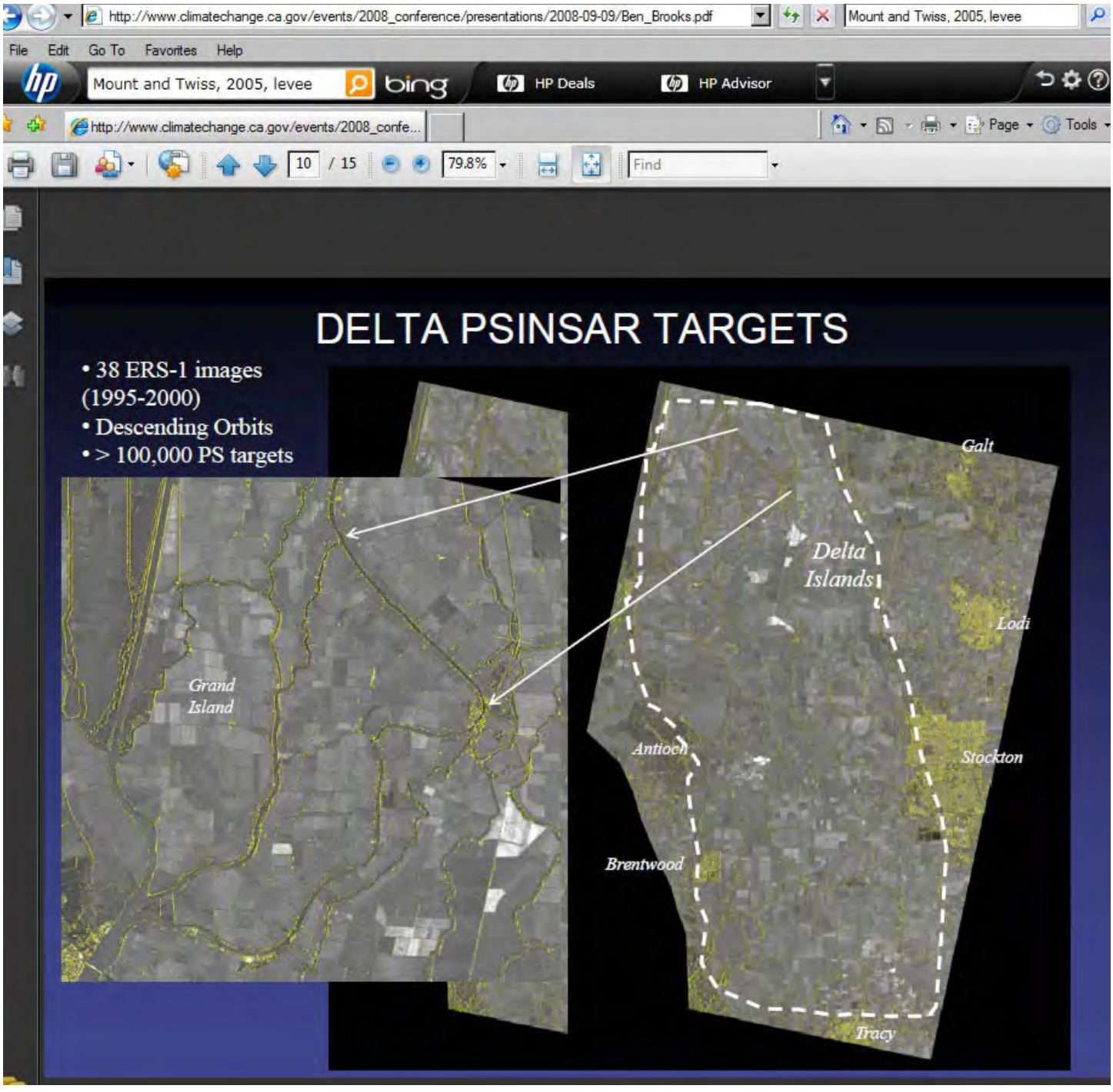
Google maps listing the Real Ryer Island as "Tyler" Island



Part of the problem with wrong Delta island and waterway names is that Google has been incorrectly labeling islands and waterways since at least 2005. Google apparently has a contract with several governmental mapping agencies, which might explain why normally accurate organizations like NOAA is currently displaying incorrect Delta location names online.



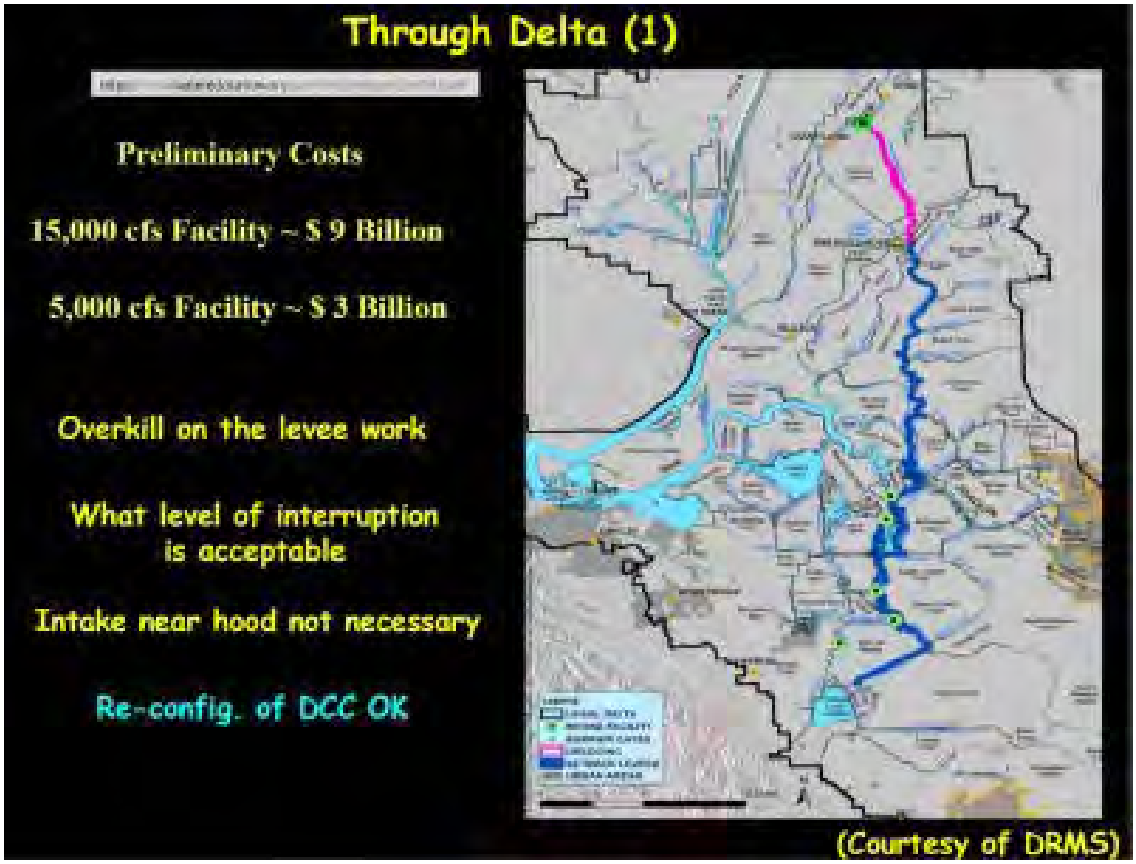
Even after the Delta Vision representatives were notified of the incorrect labeling of some of the Delta islands, the final version was published with several mistakes. The island circled is called “Ryer”.



The result is that many Delta-related speakers, including professors from UCD, continue to use incorrect Delta names in their presentations.

CalFed did not "fail" in 2003 regarding the conveyance portion of the plan, as construction has continued to move forward as "regional projects". It appears most of the elements of the CalFed 2000 ROD "preferred alternative" are complete or almost complete.

Question for BDCP or DWR speaker: Is it expected the central conveyance or "preferred alternative" which includes reoperation of the DCC, expanded capacity of Freeport pumps, revision to McCormack/Williamson Tract, dredging around the area of DCC and Dead Horse island to facilitate greater water flow down the Mokelumne Rivers, etc will be operational by the end of 2012 or earlier? Will it include use of Staten Island for In-Delta water "detention" or other Delta islands and if so, which islands are planned to be IDS? There as detail studies regarding the restoration of Ryer Island in the Suisun marsh area. What is the plan for the Ryer Island north of the Rio Vista bridge bordered by Steamboat Slough? The following maps express graphically the ongoing CALFED conveyance project pathway, and the continuing confusion regarding restoration and the two Ryer Islands.

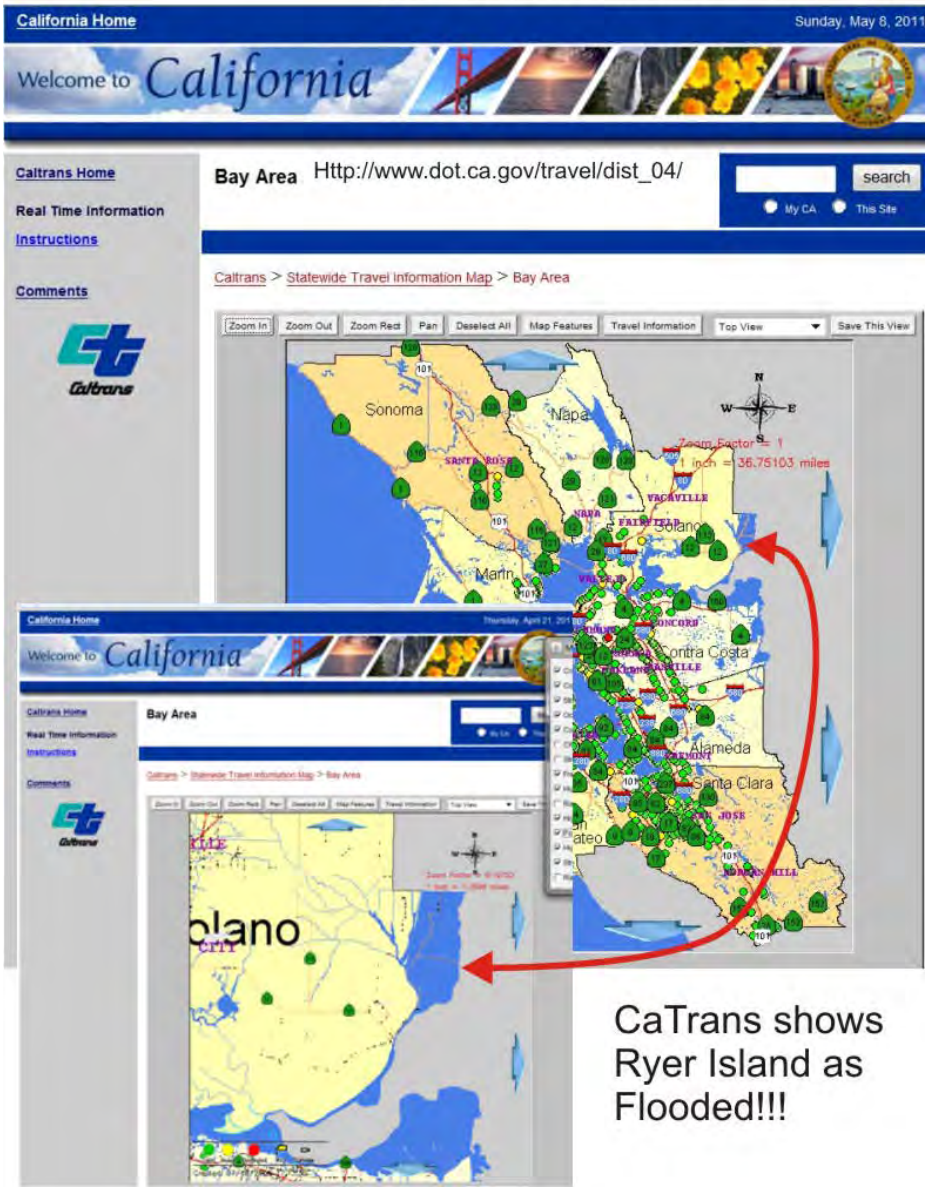


Project Map

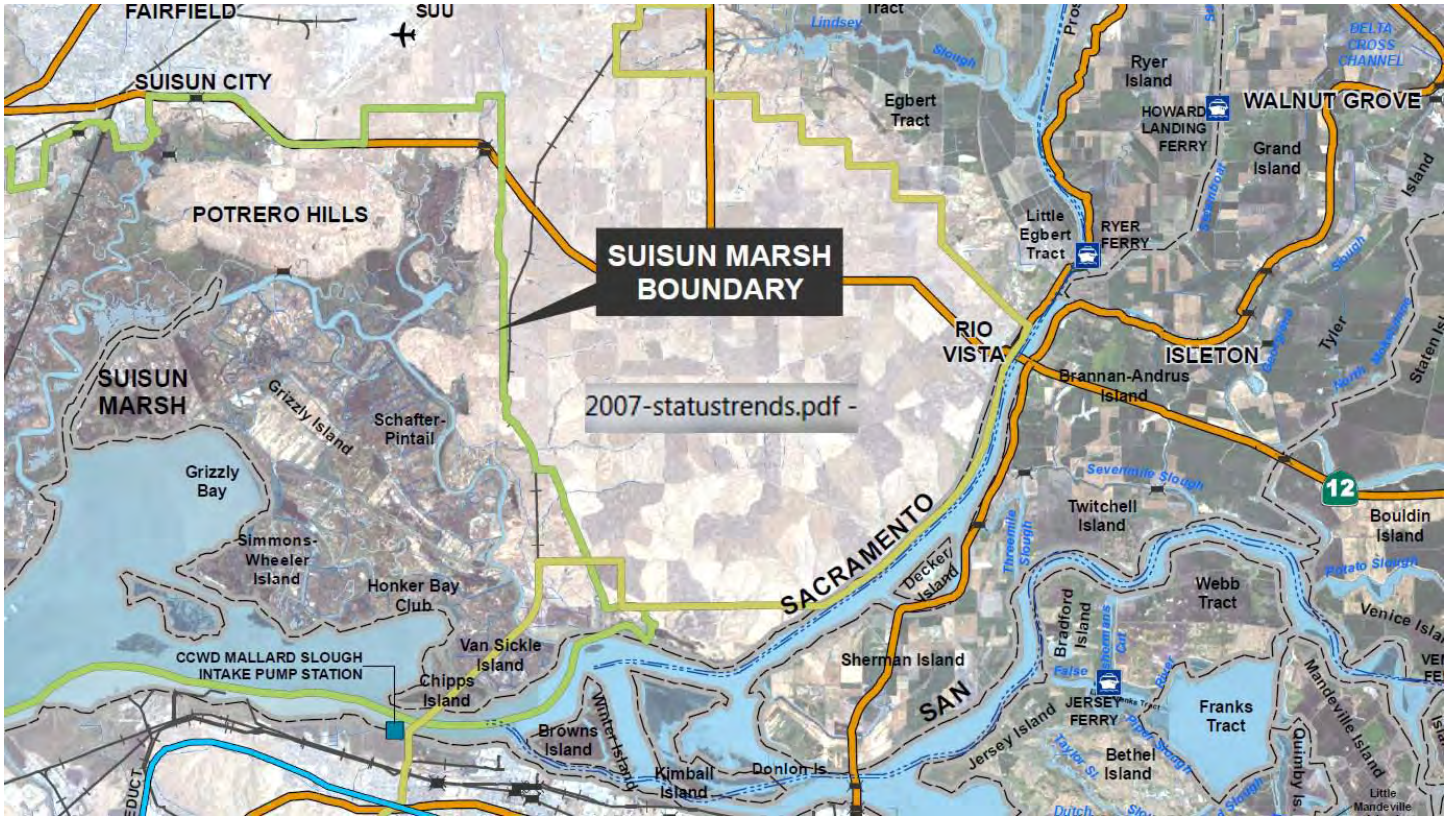

Conveyance Actions in the Delta
Sacramento River
Through Delta Facility
Re-operation of Delta Cross Channel
North Delta Flood Control and Ecosystem Restoration Improvements Program
Old River and Rock Slough WQ Improvement Projects
Fish Screen and Pump Facility at CCF
Flow Control Barriers
Fish Control Barrier
DMC/CA Intertie and San Luis Reservoir Low Point Improvement Project
Fish Screen Facility at Tracy
Lower SJ Flood Improvements


Emergency Freshwater Pathway Concept
Sacramento
Stockton

CURRENT CALTRANS DISTRICT 4 "TRAVEL MAP"



The above map is part of section 4 of this paper, but is also an example of another erroneous Delta map.



Map above is another example of an erroneous Delta map, as it omits important labeling.

Since URS has conducted extensive studies regarding the Suisun Marsh area, including “Ryer Island” which is not named in the planning map, are the detail studies actually intended to be focused on the “Ryer Island” north of the Rio Vista bridge, bordered by Steamboat Slough?

Thank you in advance for your time and attention to my concerns and questions regarding plans for the Sacramento San Joaquin Delta in general, Steamboat Slough and Ryer Island in particular.

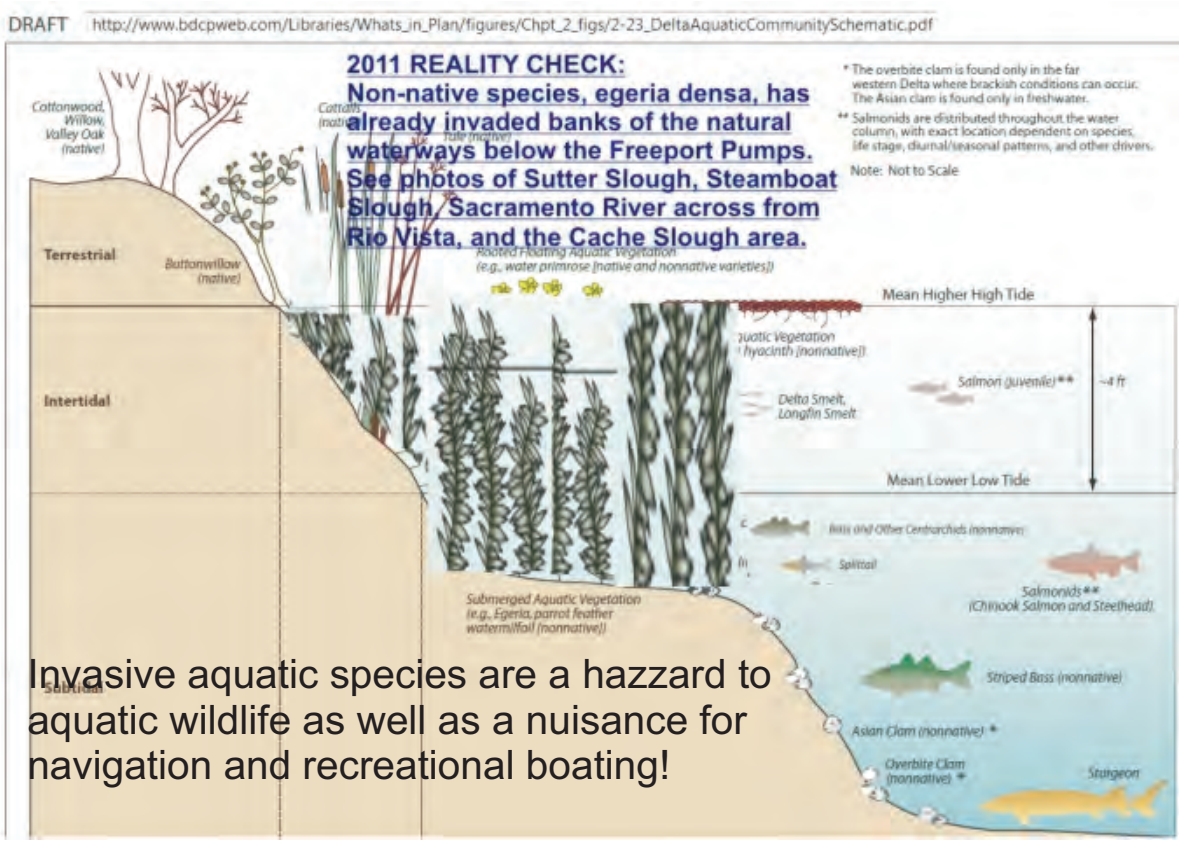
Respectfully submitted,

Nicole S. Suard, Esq., Managing Member, Snug Harbor Resorts, LLC

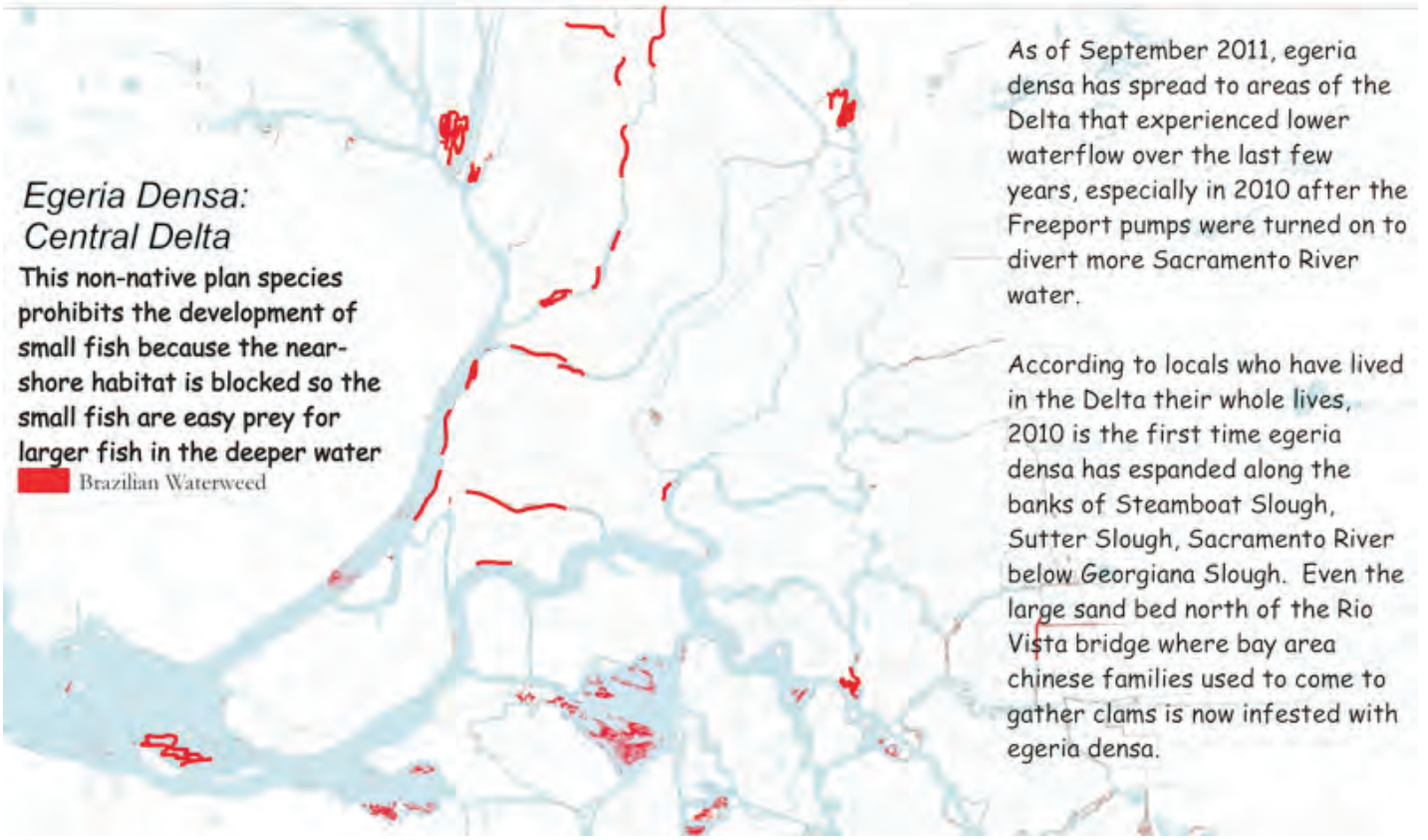
Cc: Jeffery Mount, UCD, Delta Vision, PPIC, URS, DWR, USBR

ATTACHMENT G TO DELTA PLAN COMMENTS

Examples of invasive aquatic species invading the Delta fall 2011
Photos by Nicky Suard, Esq. Snug Harbor Resorts, LLC



Invasive aquatic species are a hazzard to aquatic wildlife as well as a nuisance for navigation and recreational boating!



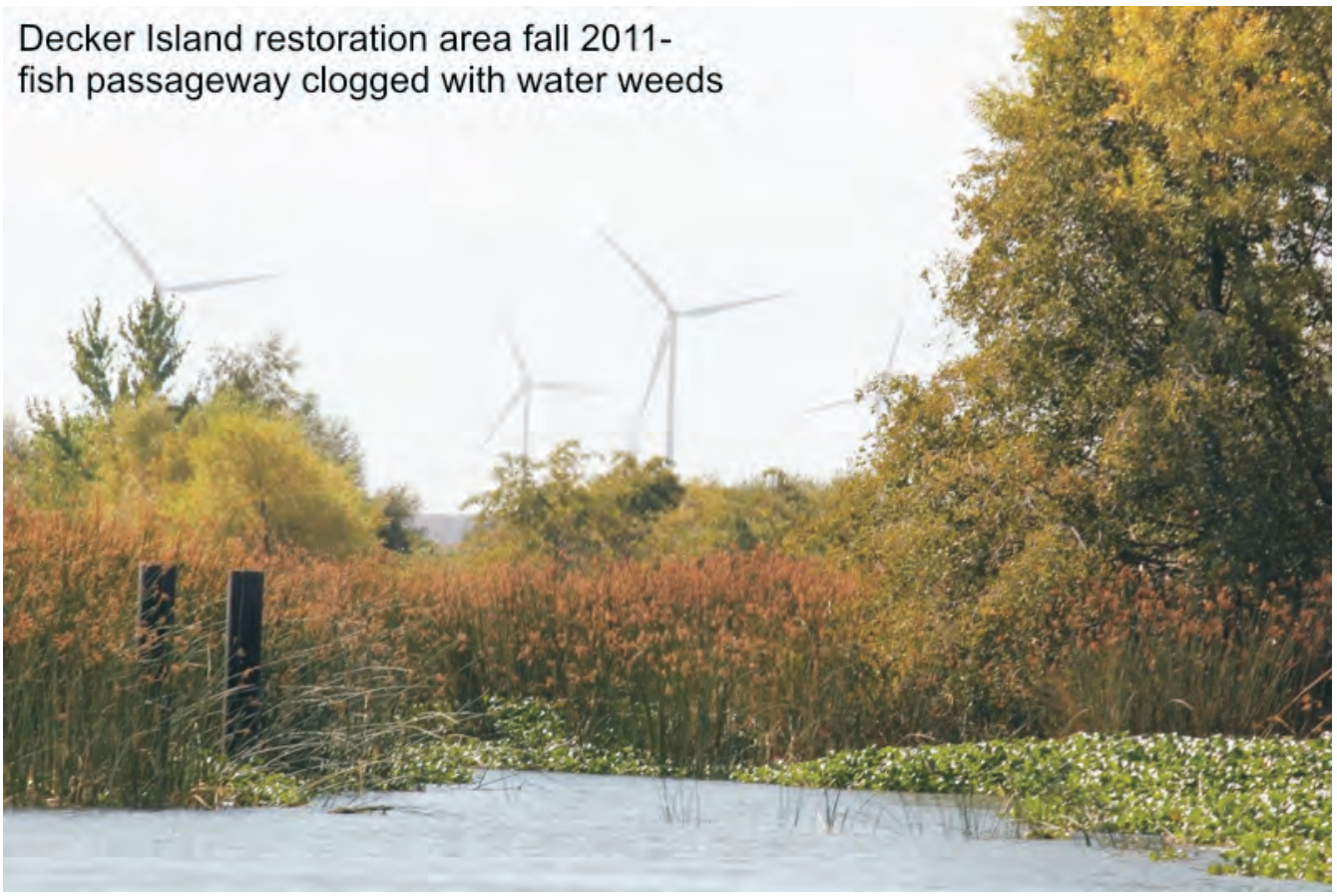
As of September 2011, egeria densa has spread to areas of the Delta that experienced lower waterflow over the last few years, especially in 2010 after the Freeport pumps were turned on to divert more Sacramento River water.

According to locals who have lived in the Delta their whole lives, 2010 is the first time egeria densa has espanded along the banks of Steamboat Slough, Sutter Slough, Sacramento River below Georgiana Slough. Even the large sand bed north of the Rio Vista bridge where bay area chinese families used to come to gather clams is now infested with egeria densa.

Boat launch at Locke/The Meadows-Egeria Densa has taken over!

Egeria densa at the Grand Island restoration site

Decker Island restoration area fall 2011-
fish passageway clogged with water weeds



By Decker Island fall 2011

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Sampling of
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e Delta,

There are 193 known introduced species in the Delta. These species dominate many Delta biological communities in both number and biomass.

http://www.water.ca.gov/floodmgmt/dsmo/sab/drmsp/docs/Status_and_Trends-PRD.pdf

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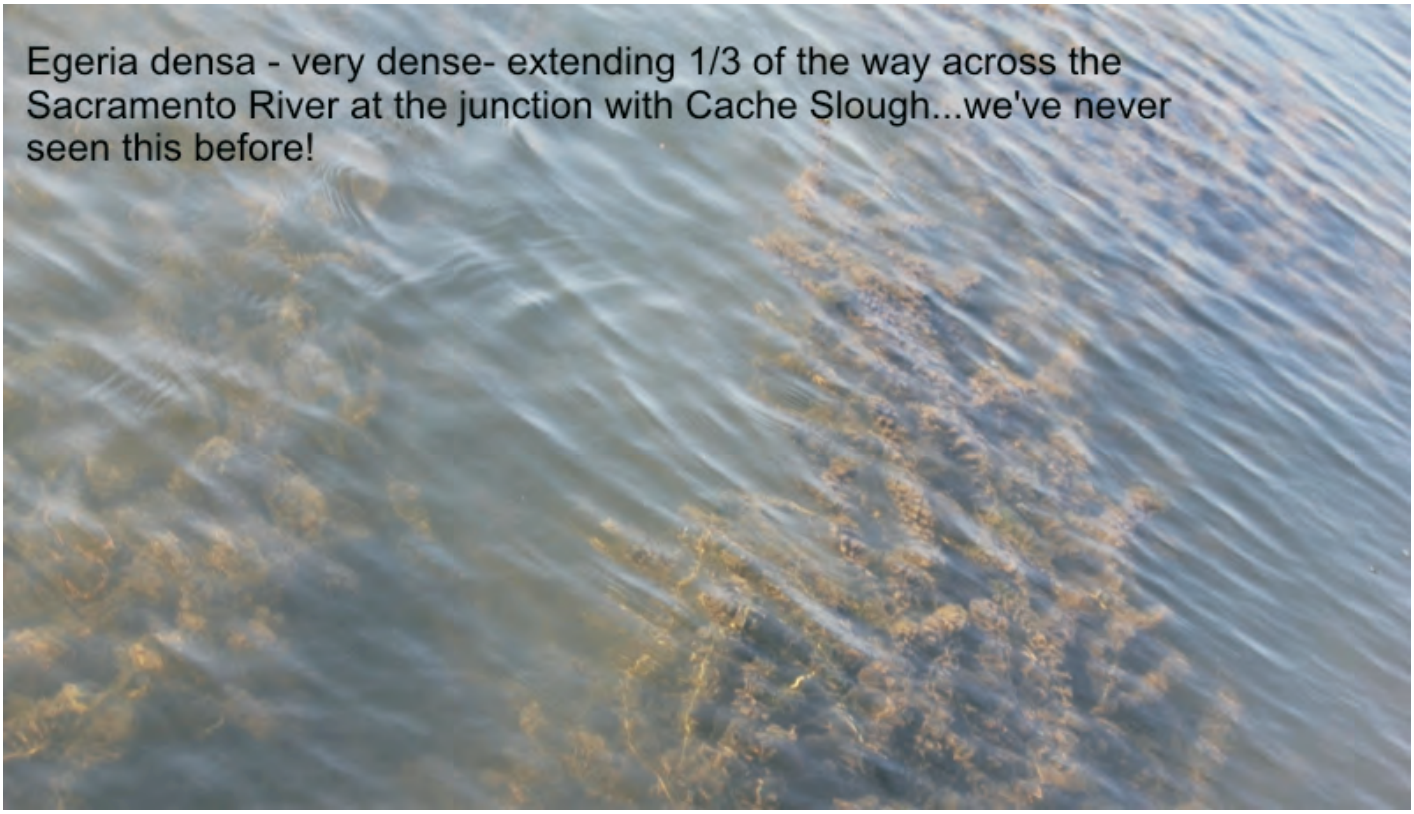
Introduced waterweed can overwhelm low velocity channels

Sacramento River off Brannan Island Fall 2011

3 Mile Slough at the banks of Brannan Island Fall 2011

Cove off Steamboat Slough where turtles and river otter used to live...



Unless funding and an annual plan to control invasive aquatic species is included as part of the Delta Plan, the Delta will eventually become clogged, limiting use of exports pumps, limiting use of in-delta irrigation pumps, limiting smaller fish to access to saffer shallow habitat, limiting recreation boating and fishing, which will also negatively impact local economies.

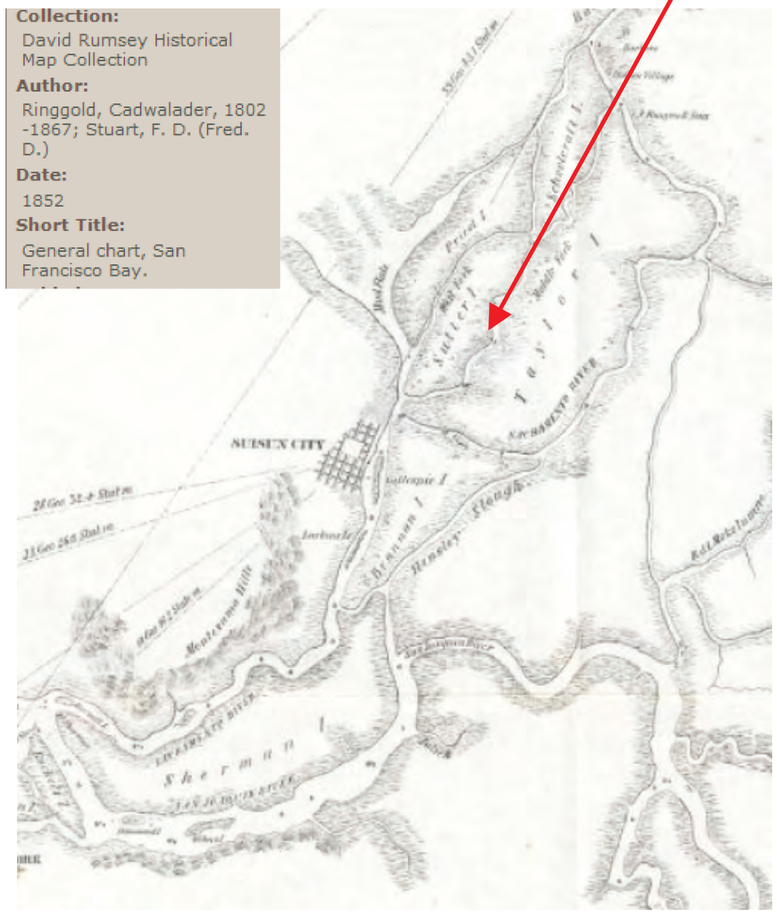
It's a simple fact that lower water flows allow for increase in aquatic species growth. How will the Delta Plan deal with this serious Delta-wide issue?

ATTACHMENT H

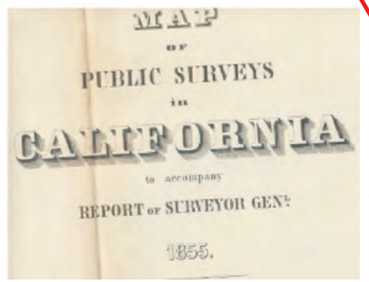
DELTA HISTORY VS THE DELTA PLAN: Original or natural North Delta waterways

Section of 1852 survey of navigation on the Sacramento River. For a short video describing navigation and scenes Http://snugharbor.net/old_sacramento_river-video.html or http://snugharbor.net/oldriversacramento.html Steamboat Slough was the primary navigation route for steamships transporting passengers to and from Sacramento. More historic

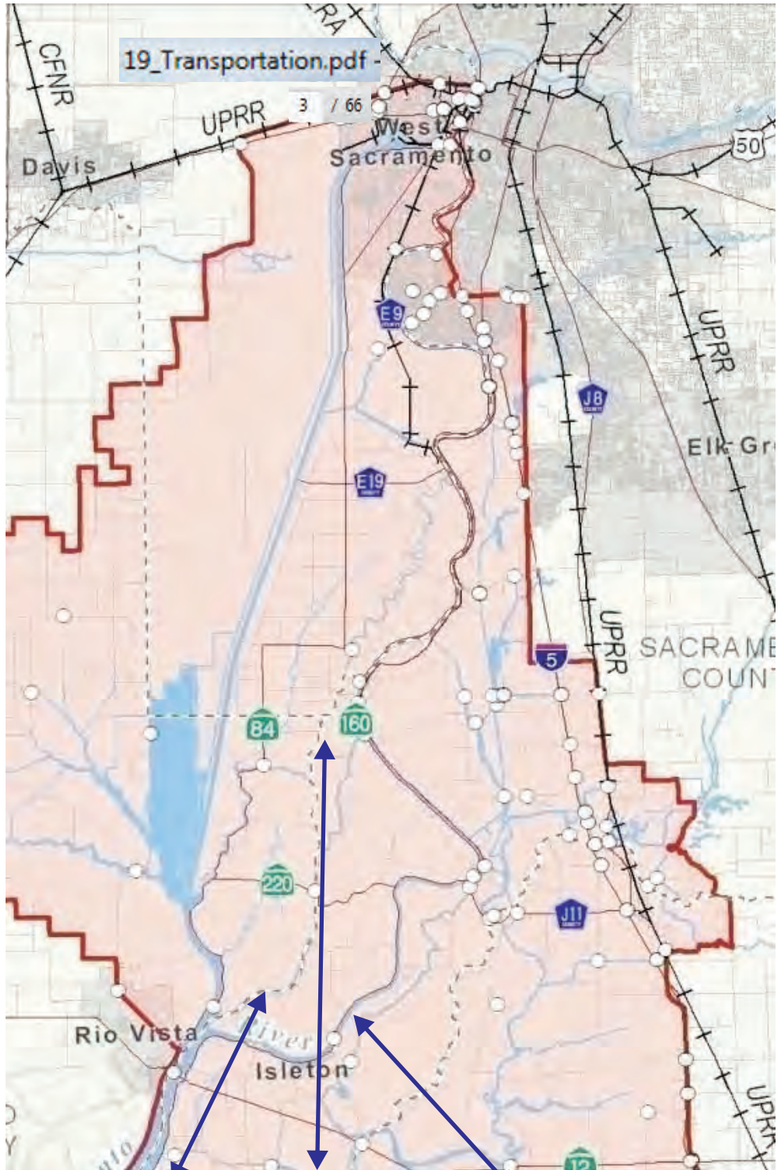
Steamboat Slough location



Portion of 1873 Irrigation map



The Delta Plan for Transportation appears to eliminate the original natural transportation routes of the North Delta, to be replaced with the Sacramento Ship Channel-a man-made waterway. This violates previous laws and codes, and renigs on previous assurances to Delta land owners and California boaters.

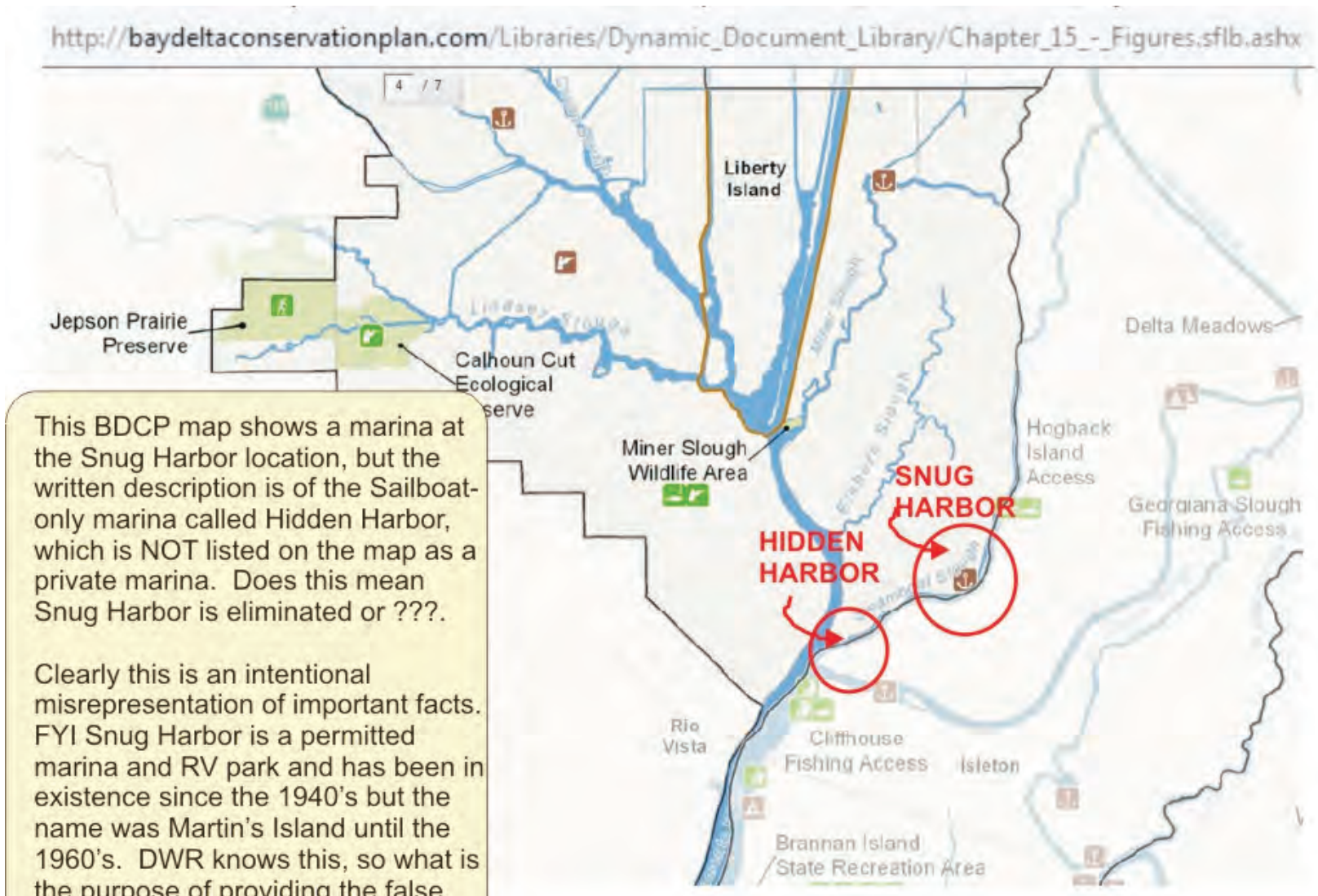


Steamboat Slough Sutter Slough Sacramento River

ATTACHMENT J COMMENTS ON THE DELTA PLAN 1/26/2012

The following maps and report sections show the quality of work currently produced by the BDCP. If the drafters of the BDCP, who have boated by Snug Harbor and some have actually visited the peninsula still confuse its location, how can anyone trust the accuracy of other data provided in the BDCP?

CURRENT BDCP MISTAKES



Note to Reader: This is a preliminary draft prepared by the BDCP EIR/EIS consultants and is based on partial information/data. It has not been reviewed or approved by the Lead Agencies and does not reflect the Lead Agencies' or Consultant's opinion that it is adequate for meeting the requirements of CEQA or NEPA. This document is expected to go through several revisions prior to being released for formal public review and comment in 2012. All members of the public will have an opportunity to provide comments on the public draft of the revised version of this document during the formal public review and comment period. Responses will be prepared only on comments submitted in the formal public review and comment period.

Recreation

Hidden Harbor Marina

Hidden Harbor Marina is an all-sailboat facility located at the junction of Cache and Steamboat sloughs, just west of the Alternative 1C canal alignment. Vehicular access to the marina would be maintained using SR 84 or a detour. Traffic levels on SR 84 may increase because of construction. On-water access to the marina would also be maintained, and use of the marina's boating facilities would not be affected by construction. Boating opportunities would still be available at the marina during canal tunnel construction; however, the recreation experiences of marina users may be affected by construction activities. Construction activities in Steamboat Slough would not be visible to marina users. Marina users may be able to hear construction noise, however, which could

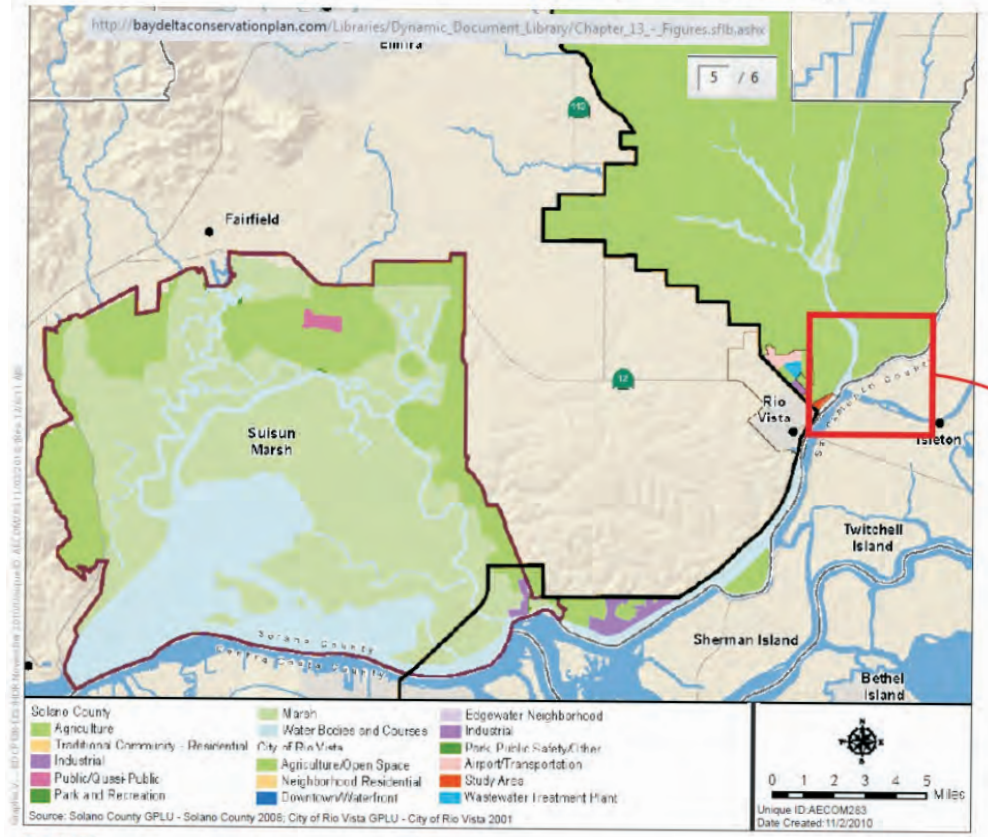
Table 15-12 lists the recreation sites that fall within the construction right-of-way, within the CPA, or are within 1,000 feet of the CPA limits. Specific effects are discussed below. See Chapter 17 Visual Resources and Chapter 27 Noise, for additional visual- and noise-related effects on recreationists.

Table 15-12. Recreation Sites Potentially Affected during Construction of Alternative 1C

Sites in the Right-of-Way	Sites in the CPA	Sites within 1,000 Feet of the CPA Limits
Numerous Marinas or Houses with Docks	Cliff's Marina	Clarksburg Marina
Twitchell Island	Clarksburg Fishing Access	Stone Lakes NWR
	Arrowhead Harbor	Vieira's Resort
	Hidden Harbor Marina	New Anchor Marina
	Cliffhouse Fishing Access	Hennis Marina
	Jersey Island	Sunset Harbor
	Bridgepoint Marina	San Joaquin Yacht Club
	Viking Harbor	Wood's Yacht Harbor
	Harris Marina	Greg's Harbor
	Sea Horse Marina	Carol's Harbor
	Orwood Resort	Sam's Harbor
	Clifton Court Forebay	Rivers End Marina
	Lazy M Marina	Twitchell Island
	Twitchell Island	Jersey Island

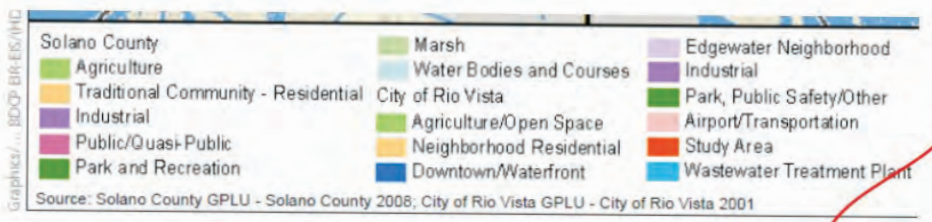
Source: Compiled by DHCCP in 2010.

BDCP 12/2011 version of the Solano County General Plan does not match what Solano County website says:

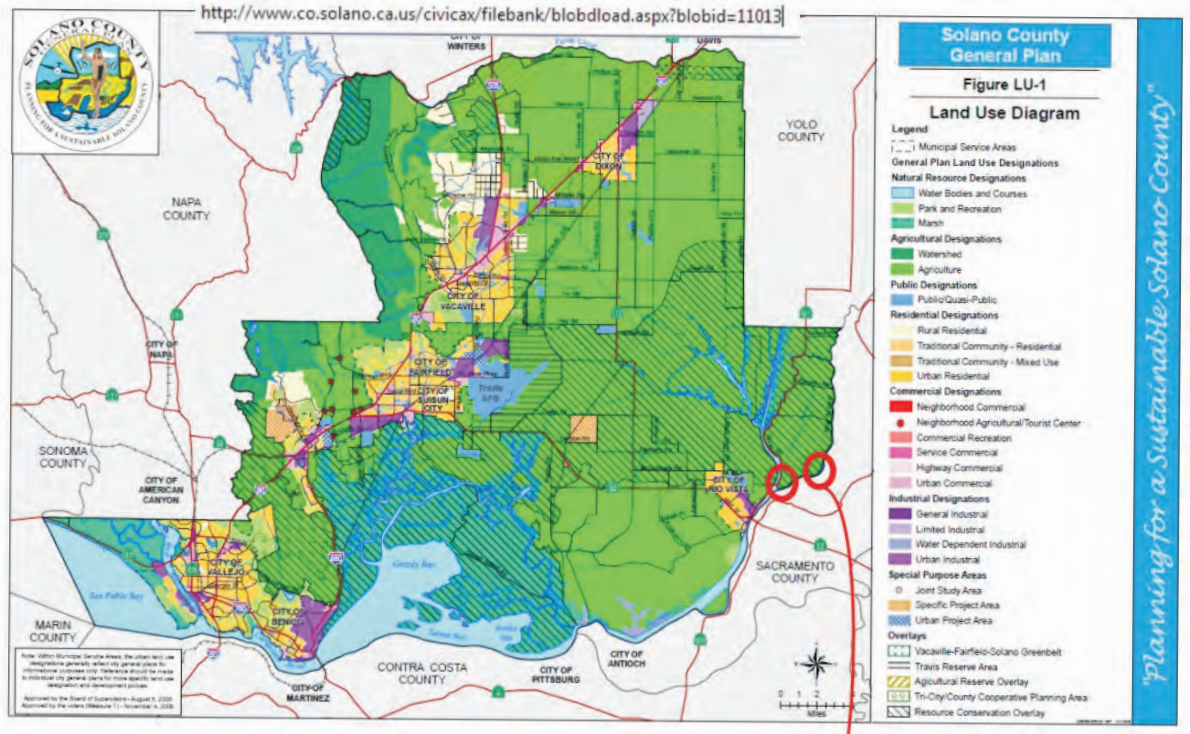


DRAFT

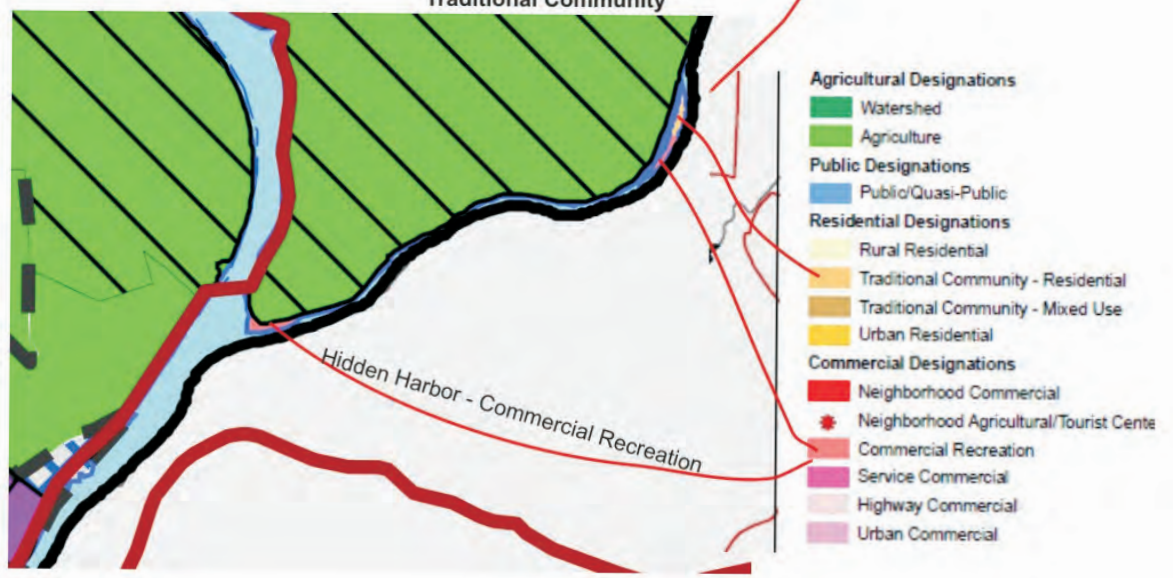
Figure 13-5
Solano County General Plan
Land Use Designations

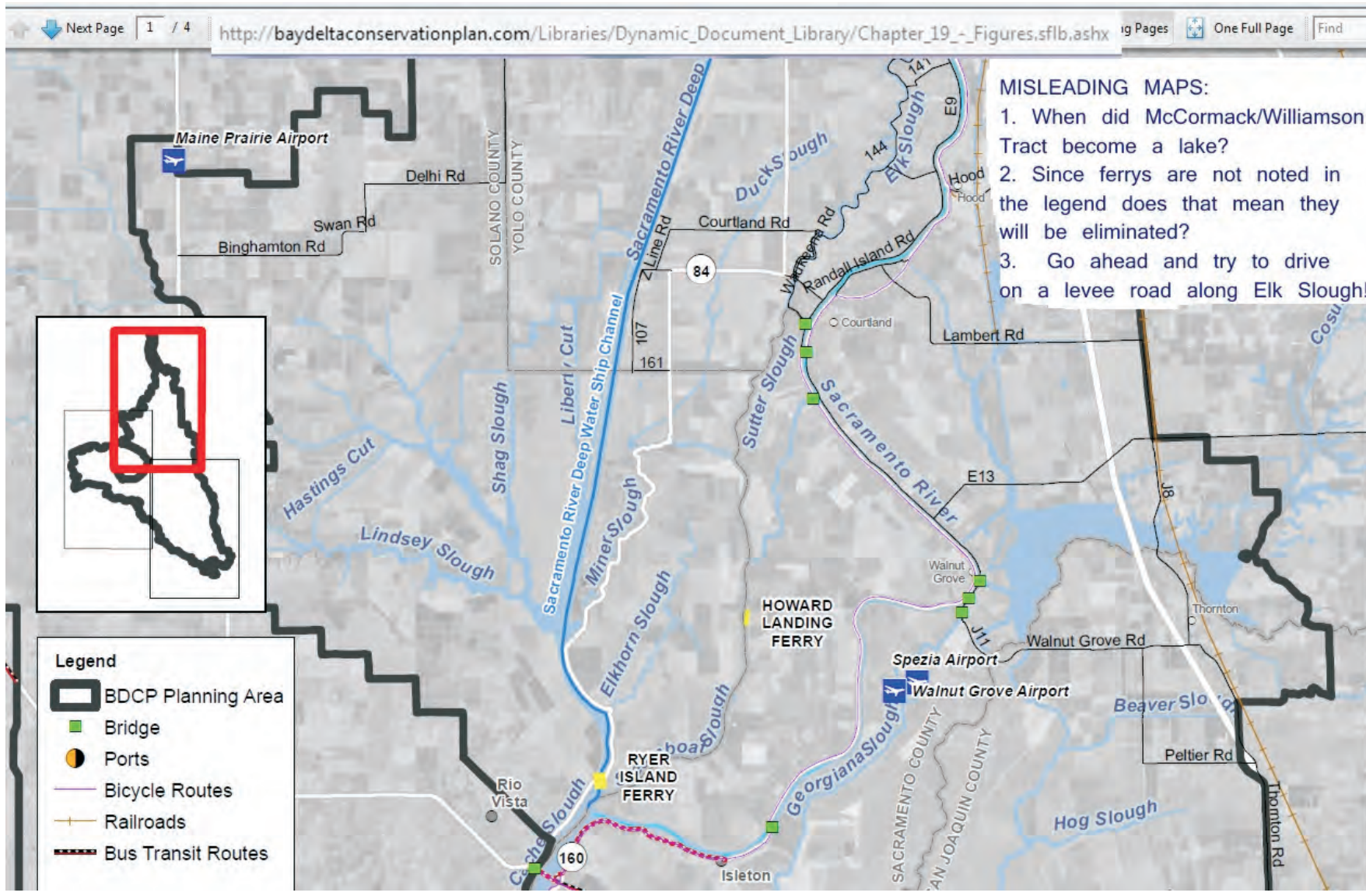


The real solano county general plan



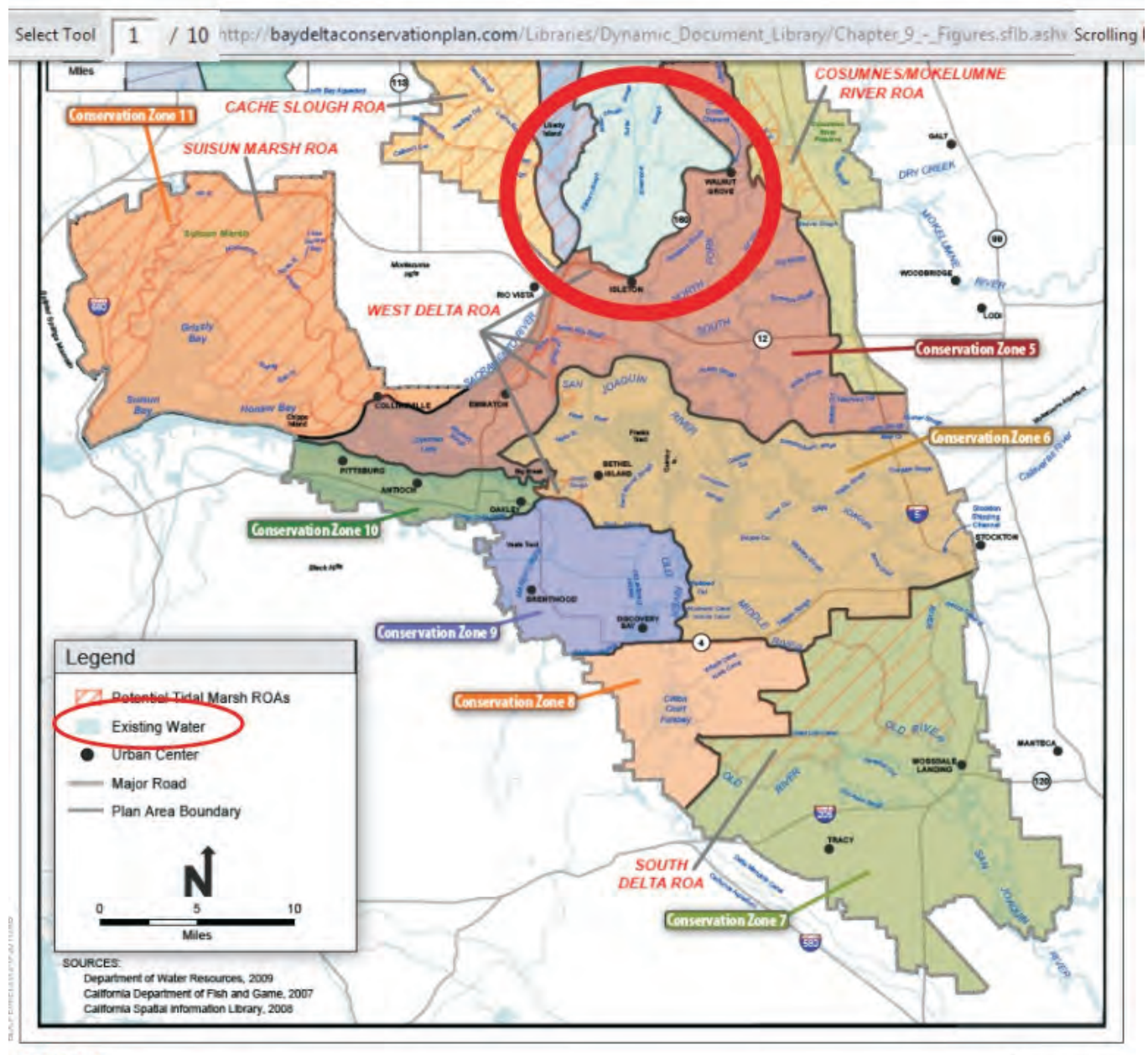
Snug Harbor Resort - Commercial Recreation and Residential Traditional Community





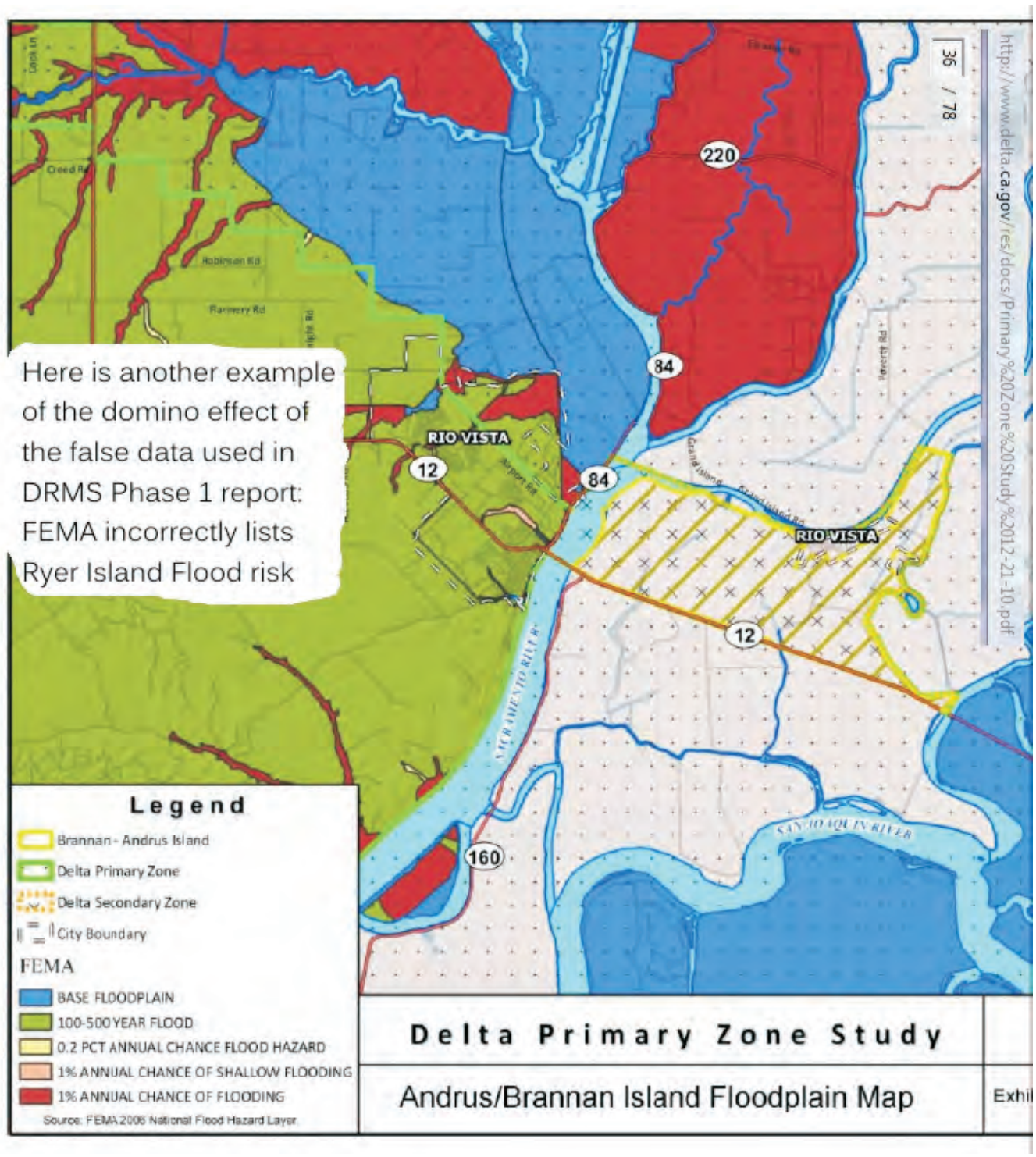
Another example of a misleading map from BDCP:
The map key says the blue color is “existing water”

Last time we looked out the window Ryer Island was not
A lake and neither was Grand, Sutter or Merritt Islands.



DRAFT

Figure 9-1
Restoration Opportunity Areas



Note that the above BDCP map was based on a FEMA map that was based on false Ryer Island flood history which FEMA was provided by DWR as part of the DRMS Phase 1 technical studies.

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3356 Snug Harbor Drive
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Walnut Grove, CA 95690
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Snug Harbor Resorts, LLC
Web site:
http://SnugHarbor.net

December 27, 2011

Benjamin Carter, President, Board of Directors, Central Valley Flood Protection Board lpendleb@water.ca.gov
Jay Punia, Executive Officer, CVFPB jpunia@water.ca.gov
Len Marino, Chief Engineer, CVFPBlmarino@water.ca.gov
David Williams, Sr. Engineer, Flood System Improvements Section davidw@water.ca.gov

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Kere,uArrocj. Chief, Merritt Rice, Project Manager
Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236

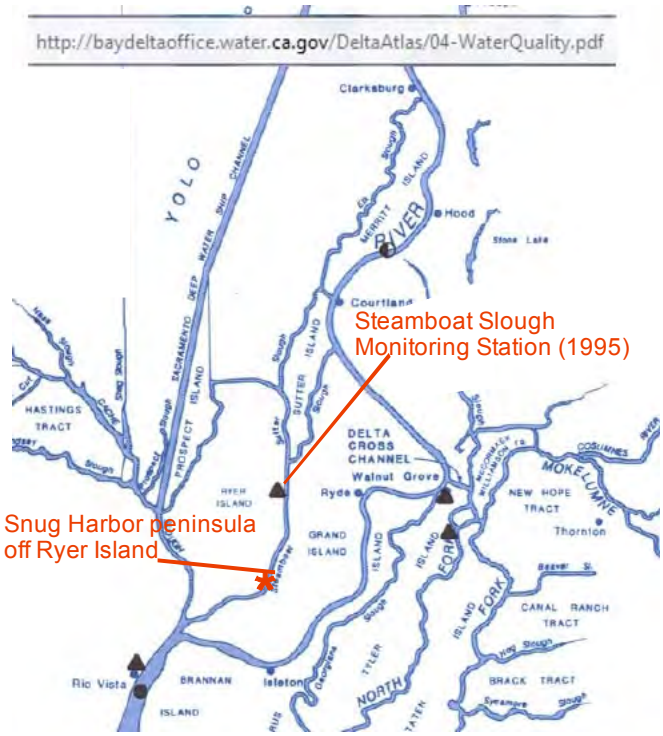
Melinda Terry, Executive Director, Central Valley Flood Control Association and NDWAMelinda@northdw.com

&Gary Kienlen, MBK Engineers kienlen@mbkengineers.com

Dear CVFPBoard:

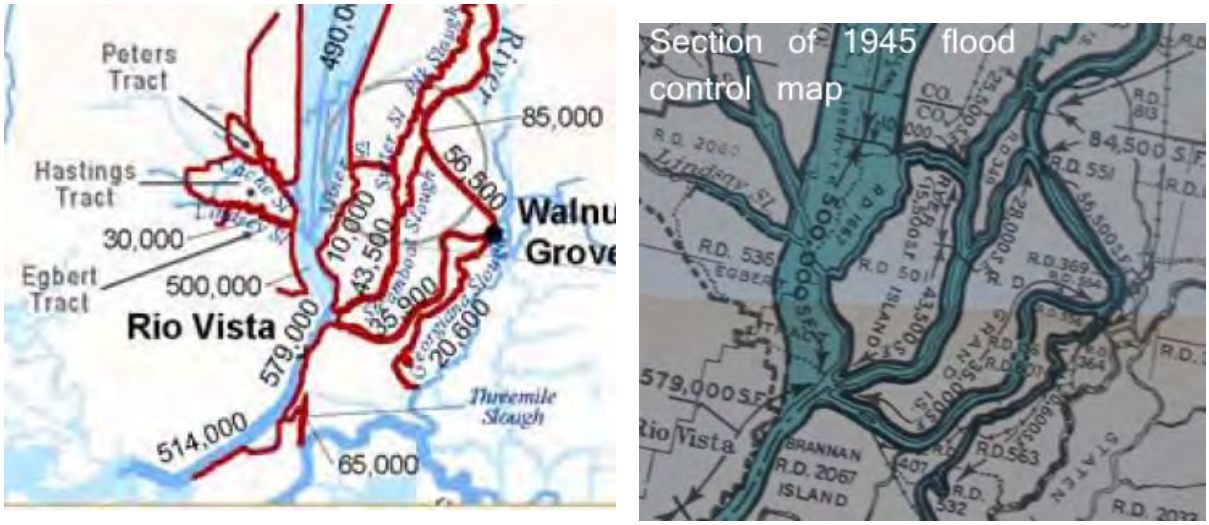
This letter is written to request review and revision of the proposed flood control plan for select locations within the Delta region, with a focus on the proposed flood flow capabilities for Steamboat Slough, between river miles 15 to 26, as shown on the CVFMP map, from the State Plan for Flood Control[1].“Public safety is the top priority for the CVFPB” according to your website, so you appear to be the ones to address a potential public safety issue due to the proposed flood flow design capability of Steamboat Slough, Sutter Slough and the Main Stem of the Sacramento River, as shown in current documents online. Below is a map of the area of the Delta that is the topic of my concern, which is flow on Steamboat Slough and the effect of that flow on the landowners of Snug Harbor.

[1]http://www.water.ca.gov/cvfmp/docs/SPFCDescriptiveDocumentNov2010.pdf



Location of Snug Harbor on Steamboat Slough

Snug Harbor is a peninsula off Ryer Island, on Steamboat Slough about river mile 17.5. (Solano Counry 1961 survey map refers to the land as Martin's Island)[2].The SPFC indicates 43,500 cfs flood capacity flow for Steamboat Slough, the same flow as proposed in the 1945 Sacramento River Flood Control Project. However, the 1945 plan assumed Steamboat Slough would be maintained at a much deeper depth than it is today; no dredging of the silt has been done since 1977 according to local records. **Based on observation and experience over 14 years of ownership of property on Steamboat Slough, I believe the flood flow capacity of Steamboat Slough is more in the range of 15,000 cfs to 20,000 cfs total.**



Note how the section of the 2011 draft flow map (left) matches the 1945 Sacramento River Flood Control Project map of the same area. (right)

[2] http://snugharbor.net/historic_steamboat_slough.htm

Steamboat Slough – Sac River to Sutter Slough	10	7	28,000	28,000	28,000
Steamboat Slough – Sutter Slough to Sac River	7	0	43,500	43,500	43,500

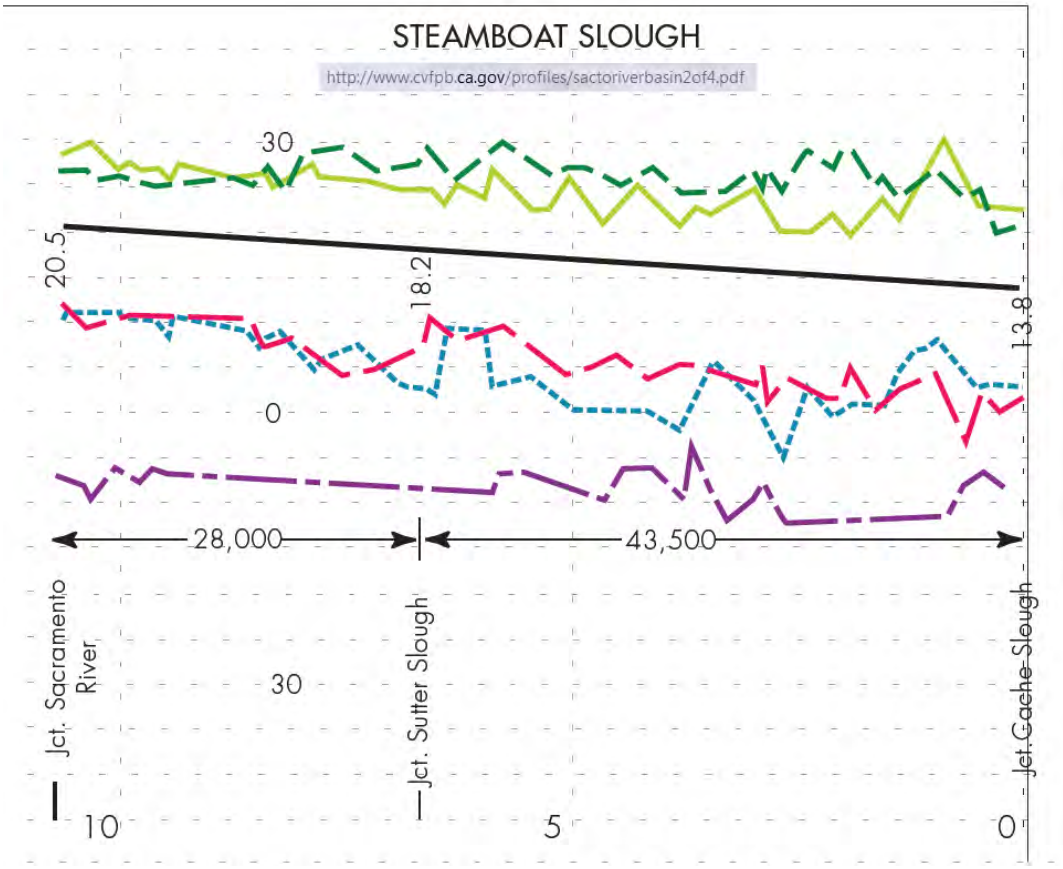
http://www.water.ca.gov/cvfmp/docs/SPFCDescriptiveDocumentNov2010.pdf (44 of 154)

Is the existence of Snug Harbor land owners and others along Steamboat Slough considered in the SPFC flood flow capacity assessment? Does the state realize it causes high water events on the properties of Steamboat Slough, at Snug Harbor, when flow is not even at 20,000 cfs and other factors are present? The SPFCD does not appear to account for impact to Snug Harbor landowners or business.

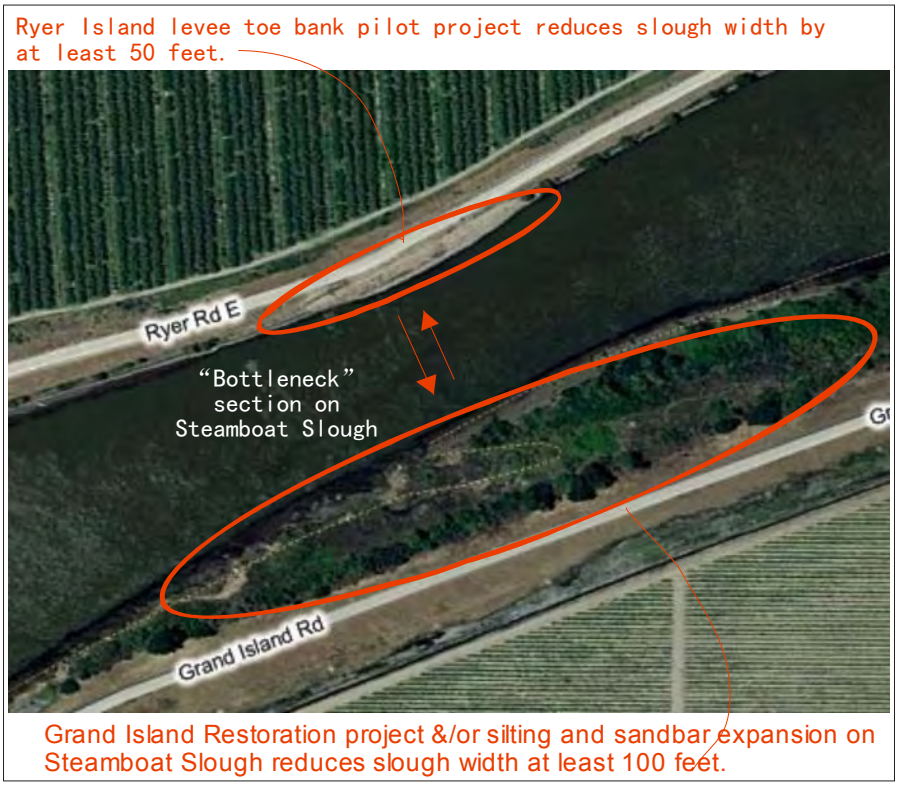
In addition, even when flows are lower on Steamboat Slough, high water flow on Cache Slough can back up into Steamboat Slough, then into Snug Cove area, and cause flooding on the peninsula even when no other are of the Delta is flooding. I believe the Sacramento River (approximately River miles 15 to 35) is both wider and deeper, yet the SPFCmap below limits proposed flood flow to 35,000 cfs on the Sacramento River. Why does SPFC propose higher flow on Steamboat Slough, which has less physical capacity than the main stem of the Sacramento River? I added red arrows to the photograph of the Snug Harbor peninsula to show how flood flows and the back up of flood flows reaches Snug Cove on the east side on the peninsula.

Perhaps in the past when Steamboat Slough was regularly dredged, it had the extra flow capacity. However, since 1976 or 1977, the last time it was dredged, Steamboat Slough has been filling in with silt at specific areas, which reduces the flow capacity. Noted silt or growning sandbar areas can be seen at approximate river miles 15, 17,18 19, and 23 to 26 at the north end of Steamboat Slough. I believe the slough bed has changed since the last dredging and the last depth survey also. (survey screen print on the next page).

Based on conversations with land owners along the northern portion of Steamboat Slough, they have seen a stark increase in silting in that area *in just the last two years*.By summer 2011 sandbars infested with non-native egeria densahave been seen on both sides of Steamboat Slough at all normal tide levels.



This graphic shows an estimated profile for Steamboat Slough that does not appear to account for current channel margin changes observed summer 2011.



In addition, the riparian restoration project off Grand Island south of Snug Harbor, combined with the levee toe & restoration project on the opposite side of Steamboat Slough, along Ryer Island, at about river mile 16.5, are creating a "bottle neck" effect that further causes back up of water flow onto Snug Harbor. If you consider flood water exiting Steamboat Slough as an important flood control "structure" then the importance of the continued water flow restriction in this area becomes more clear, as it is a known fact that sedimentation upstream from flood control structures obstructs flow and reduces capacity. The turbidity or particles in the water settle to the

bottom if the velocity of flow is slowed, thereby causing more silting in or raising of the slough bed, further reducing flood flow capacity.

In addition, the *reduction* of flow during summer and fall appears to have created an environment where the invasive aquatic plant species like egeria densa has flourished greatly along both sides or banks of Steamboat Slough for the entire length of the slough. Both the egeria densa infestation and the expansion of the tules on the growning sandbars will create further water flow hindrance, which further reduces flood capacity on Steamboat Slough. Basically, Steamboat Slough is receiving to much flow during high water times, and not enough fresh water flow during the summer and fall months.

Another problem has been the extreme ebb and flood tides on Steamboat Slough during the "fish studies" of the last few years. The "pulse flows" on Steamboat Slough from January through May, particularly in 2011, have been washing away the banks of Snug Harbor, especially the area at the north end of the peninsula, which is the sole access road for the 28 private home parcels and resort property which comprise Snug Harbor. (see photo on page 3 to locate north end of road) I do not know why the pulse flows of 2011 would cause so much erosion damage to the Snug Harbor banks, but they did.

For example, February through May 2011 we noticed sections of north bank along Snug Harbor Drive were washing away during the times when the extreme ebb and flood tides were present. I contacted Solano County public works and the representative for Reclamation District 501, Ryer Island. Several times we had to place sandbags along the banks. By April 2011, the road bank at the north end of Snug Harbor Drive had eroded to the edge of the pavement, and in one area had eroded as much as three feet under the pavement. We had to add substantially more sandbags, and I again contacted Solano County and Reclamation District 501 office, since if our road completely washed away, it could threaten the levee in that area as well. I also contacted the California Flood Control representative, as advised by 501 representative and Solano County office of Emergency services. By early May 2011, the road pavement was cracking and it looked like we could lose at least a quarter of the width of our one-lane road, which could cause risk to persons using the road, especially large emergency vehicles and large recreational vehicles. I contacted Solano County, Fish & Game and RD 501, but no one could provide assistance. In order to make sure the road

would not continue to erode (which might cause a risk hazard), I had “riprap” rock placed along the bank of the road, at low tides, over a two day period. A crane with a long arm was used to place the rock carefully so as to minimize water disturbance. I was not able to recapture the full width of the washed out bank, but the riprap did stop road erosion. I also had riprap placed on the inside curve of the road, as the excess flows on Steamboat Slough had been backing into Snug Cove and eroding the road bank on the inside curve as well. Costs to protect from road bank erosion exceeded $54,000 in spring 2011.

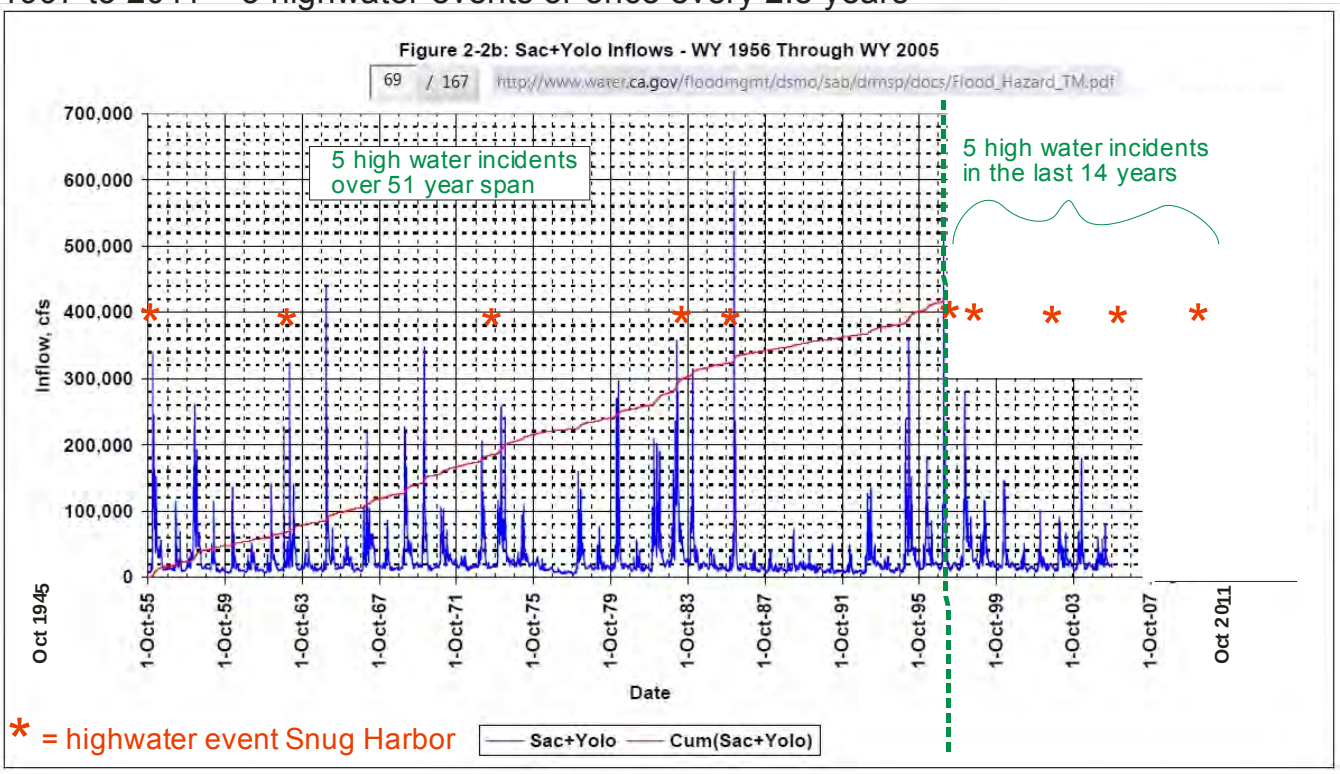
In addition, several sections of our bank within the park grounds experienced substantial erosion and we lost some very tall and healthy trees that fell into the water due to bank erosion during the extreme ebb and flood flows that seemed to coincide with DCC closure and fish “pulse flows”. The cost of cutting up and hauling out the trees was in excess of $1500 each.

In addition, I have been collecting the historical records of “high water” events at Snug Harbor (Martin’s Island) since the property was developed into a marina, RV park and private home parcels starting in the early1940’s when it was reconfigured into a peninsula under written agreement with state & federal authorities at that time, as recorded with resort parcel. (The island was purchased from the state in a land patent recorded 1878) Many of the original home owners along Snug Harbor Drive still have the properties in the same family, and some of seasonal visitors to the resort have been coming here since the 1950’s. Written records show that from 1945 to 1996 the only incidents of flooding any portion of the lands of Snug Harbor coincided with major floods Delta-wide: 1955/56, 1962, 1973, and 1986 were the years where flood waters came onto portions of Snug Harbor Drive, at least 6 inches deep, for at least 1 tide cycle. Five “high water” events over a 56 year span, each of which coincided with area-wide high water flow, indicates an average of once per every ten years the park should plan for flood clean up expenses.

However, from 1997 to spring of 2011, a span of 14 years, we have experienced high water events at Snug Harbor in 1997, 1998, 2002/2003, 2006 and spring 2011. **That is a new average of high water events every 2.8 years over a span of just 14 years**! Some of the high water incidents of the last 14 years have NOT coincided with high flow and precipitation levels on the Sacramento watershed system. Since other areas of the Delta have not had a similar increase in high water incidents, there must be a reason the state is sending excess flows onto Steamboat Slough at specific intervals, even during “dry” or low precipitation winters. The chart below was made by

combining DWR Sacramento River + Yolo Bypass inflows for 1956 through 2005[3] with the local Snug Harbor documented incidents of high water on Snug Harbor Drive, 1956 through spring 2011, to graphically show the substantial increase in high water incidents over the last 14 years, which did not necessarily correlate to system-wide excess water flow.

1945 to 1996 = 5 highwater events or once every 10 years
1997 to 2011 = 5 highwater events or once every 2.8 years



Note: Steamboat Slough/Snug Harbor highwater events added to DWR chart of historic flows

Note that I've been onsite for most of the high water events of the last 14 years. Photos to the left are from the 2006 high water event, where we had up to 12" of water onsite, and from 2011, where a portion of Snug Harbor Drive was affected. I've observed that it is not fast-flowing water that invades the peninsula land, but instead we see a slow rise of the water, like filling a bath tub, as the flow from Cache Slough backs up into Steamboat Slough, and the water flowing down Steamboat Slough gets trapped by the bottleneck around river mile 17 to 18, or blocked by the flow of Cache Slough.

[3] http://www.water.ca.gov/floodmgmt/dsmo/sab/drmsp/docs/flood_hazard_TM.pdf page 69 or 167.

Clearly, there has been some change in how flow is directed onto Steamboat Slough in the last 14 years. Clearly, flow *capacity* of Steamboat Slough is declining as the slough bed is allowed to continue to silt in and restoration projects create further flow hindrances, all of which increases the average incidents of high water at Snug Harbor during winter or early spring months. It does not appear that the current proposed flood control plan for this area takes into account the above when calculating channel flow flood capacity.

(In addition, I've noted a pattern whereby closure of the Delta Cross Channel gates tends to increase flow on Steamboat Slough, and higher water flow seems to coincide with the "fish studies" regarding salmon and smelt runs, so perhaps when the fish agencies stop doing the studies, the flow issues will also cease?)

Note that the resort infrastructure was upgraded over the last 10 years to make sure we are ready and able to withstand the high water events, but that does not mean we are willing to be intentionally flooded for fish studies, Yolo Bypass annual inundation experiments, or water diversion for other reasons. State flow experiments for fish or export studies should not be allowed to negatively affect private land owner use, even if the properties are able to withstand the more frequent high water incidents. The state does not compensate for the repairs and clean up costs, nor loss of revenue, when all of us on the Snug Harbor peninsula experience high water events due *not* to natural disasters, but due to the state water flow manager's intentional diversion of excess water into Steamboat Slough for studies and other non-natural disaster purposes.

I firmly believe the damage to Snug Harbor road and banks noted above is due to the state's assumption that Steamboat Slough flow capacity is higher than current physical configuration and experience shows, for the above reasons. I have expressed these same concerns to several DWR representatives since 2008, but my concerns have been ignored. I therefore specifically request that the following actions be considered by the CVFPB in conjunction with theSPFC study:

(1) That a new monitoring station for flow, water level and salinity be installed and maintained on the lower end of Steamboat Slough between approximately river mile 16 to 17; all data shall be reported online through the state website[4] and costs for installation, maintenance and monitoring shale be borne by DWR or the state water contractors;
(2) that the stated flood flow capacity of Steamboat Slough be reviewed and reduced to a reasonable, prudent level to protect land owners along the waterway;
(3) that the state consider removal of the restoration project(s) that hinder flood flow capacity of Steamboat Slough;

[4] http://www.water.ca.gov on the "dayflow" page or other page accessible to the general public.

(4) that the entire length of Steamboat Slough be dredged to the 1977 depth if the state plans to continues to allocate so much flood water flow to Steamboat Slough;
(5) that Ryer Island and Grand Island be closely inspected during one of the extreme low tides If its not already done) so that the areas where the soil under the levee rocks are being undermined will be noted, and repaired, (at least 5 areas along Ryer Island levee adjacent to Snug Cove need attention and repair);
(6) that funding be provided to the Department of Boating and Waterways in sufficient amount to eradicate flow-hindering invasive species, including egeria densa, along all banks of Steamboat Slough and the Main Steam of the Sacramento River;
(7) that a fund be set up, paid by the water exporters, administered by NDWA, to compensate Steamboat Slough property owners and other NDWA landowners for damages caused by restoration projects and any "fish studies" made necessary due to ongoing and planned revision of water exports from the Sacramento River system, and that DWR, USBR and state water contractors assume all liability for damages to property and persons caused by the ongoing revisions to flows on Steamboat Slough and any other lands affected with the legal Delta region;
(8) and I also request that if any more "fish studies" or other experiments affecting flood flow are conducted on Steamboat Slough, which result in damage to resort property, that funding be available to cover the cost of all such damage. Damage control funding should be included as part of the budget of the flow-affecting studies.

If you have any questions regarding any of the above, please email me at sunshine@snugharbor.net. For full copies of the maps referenced in this letter, please go to http://snugharbor.net/california_delta_water_wars.html or follow the links starting from http://www.snugharbor.net

Respectfully submitted,

Nicole (Nicky) Suard, Esq. (Submitted by email)

Nicole S. Suard, Esq., Managing Member, Snug Harbor Resorts, LLC

Cc: Robert Powel, Solano County Emergency contact.

Neil Hamilton, President, RD 501 District Office 3554 St. Highway 84, Walnut Grove Ca 95690 (916)775-1411

Attention: Ms. Delores Brown, Chief
Office of Environmental Compliance, Department of Water Resources
PO. Box 942836
Sacramento, CA 94236

Sent by email to: BDCPcomments@water.ca.gov

March 13, 2009

This letter is written to provide comments regarding the scope of the EIR/EIS for the Bay Delta Conservation Plan.

1. General comment: The whole notice is written so broadly that it could include almost anything anyone in BDCP would want to say is included as part of the notice; it is not specific enough regarding which properties or areas of California, which lie within the legal Delta region, will or will not be affected. This, therefore, makes it very difficult for individual property owners within the Delta (those who are or will be most negatively affected by decisions of the BDCP) to know what might or might not impact them, and to know if comments should, or should not be submitted.
2. Notice to land owners within the Delta: as all land owners within the Delta region will or may be affected by the decisions made by the BDCP during the EIR/EIS process, all land owners should receive written notice of the process and also receive written documentation which clearly states with words and visual aids like maps and charts the facts and anticipated results. If the BDCP is not equipped to provide such notice, the counties with lands affected by the BDCP EIR/EIS should be charged with the responsibility to send out legal notice to land owners. Government agencies can not assume all farmers, home owners and businesses in the Delta have access to the internet to be able to print out or read related documents. At the very least, hard copies of all stages of documentation, including all referred reports, should be provided to the city or chamber of commerce offices of each Delta town, or to the reclamation offices for the islands, and notice sent to land owners that documentation is available for viewing. Other locations in the Delta could also be designated as a documentation viewing site for local land owners, so that all those who do not have access to the internet could at least review copies at a location more convenient to their homes and businesses.
3. Setting limits: (#8, page 5: Planning Goals and page 8, #6) All natural resources have limits. Since the state's current water system cannot meet the demands it has now, all state water agencies should be directed to not accept any *new* water contracts that would *increase* demand for water from the Delta region, including the Sacramento and San Joaquin Rivers. There should be no new water contracts allowed until such time as the conflicts between demand vs supply,

environmental impact vs conveyance, is resolved. And as reductions are required, the Delta region, and those with historic/deeded riparian water rights should be the last area to be impacted by limits when enforcement.

4. Balancing Potential Environmental Effects: (Page 8, item 10) against Land Use & just compensation: Land owners within the legal Delta should not be limited in use of their property in order to provide for the benefit of land owners in other areas of the state, without just compensation. Creating excessive limits on existing Delta land use or future development (including existing riparian water rights) is, in effect, attempting to exercise a form of eminent domain over the Delta properties without just compensation. When analysis of land use is made, compensation for limited current uses as well as lost future land values should be considered as a part of the cost of the overall project. Perhaps a specific formula could be developed to avoid excess litigation between Delta land owners and the state or BDCP. For example: For farm lands, determine the market value per acre using 2005 sales, plus add future value for at least a 10 year period of loss of income, to determine the compensation to the farmer if his/her land is or will be negatively affected by the take of water or institution of mitigation measures in trade for the take of water elsewhere in the Delta. For commercial or retails businesses that may be negatively impacted by decisions of the BDCP or DWR in their effort to increase water take from the Sacramento River, a similar formula could also be used, except that capital improvement costs assumed with commercial businesses warrant use of 20 or more years of loss of income calculations. In addition, the state could make special provisions that the state will waive state capital gains taxes on sales to the state or conservation agencies or nonprofits, if such property sale is directly related to conservation efforts for the benefit of the State of California and its population. Note that I suggest the base year of 2005 for valuations because after that year BDCP and DWR reports and activities may have already begun to negatively impact normal land values in the Delta area.
5. Environmental issues related to Steamboat Slough and other sloughs listed in draft BDCP documents: (Page 8, items #5,6 and 10) Various draft documents and maps from the BDCP refer to potential restoration actions suggested for Steamboat, Miner and Sutter Sloughs and the Yolo Bypass area. As the EIR/EIS is prepared, please note that Steamboat Slough in particular can be negatively impacted by actions taken on the Yolo Bypass regarding backup of water flow, and that increase in salinity of the fresh water on Steamboat Slough may negatively impact the beautiful shady banks or riparian habitat found naturally on these sloughs. In addition, preliminary studies or documents seem to indicate an assumption that boat wakes cause damage to levees, but there is no study comparing the damage caused by the waves of winter and wind storms. Prior to boating being limited on any current or historically navigateable waterway in the Delta, a study must be conducted to verify it is the boat wakes, not naturally occurring wind and storm waves, actually causing most of the levee or bank damage. If large "no wake" zones are established in the Delta, as some draft maps suggest, clear enforcement measures and ongoing enforcement funding must also be determined at the same time. In addition, the economic effect on the community and land owners affected by the decision to limit boating in a specific area of the Delta should be considered, and just compensation provided to the affected land owners based on current and future loss of value. (Comments

regarding limiting motorized boating apply to all areas of the Delta; the above sloughs are used as a specific example because draft documentation refers to these sloughs.)

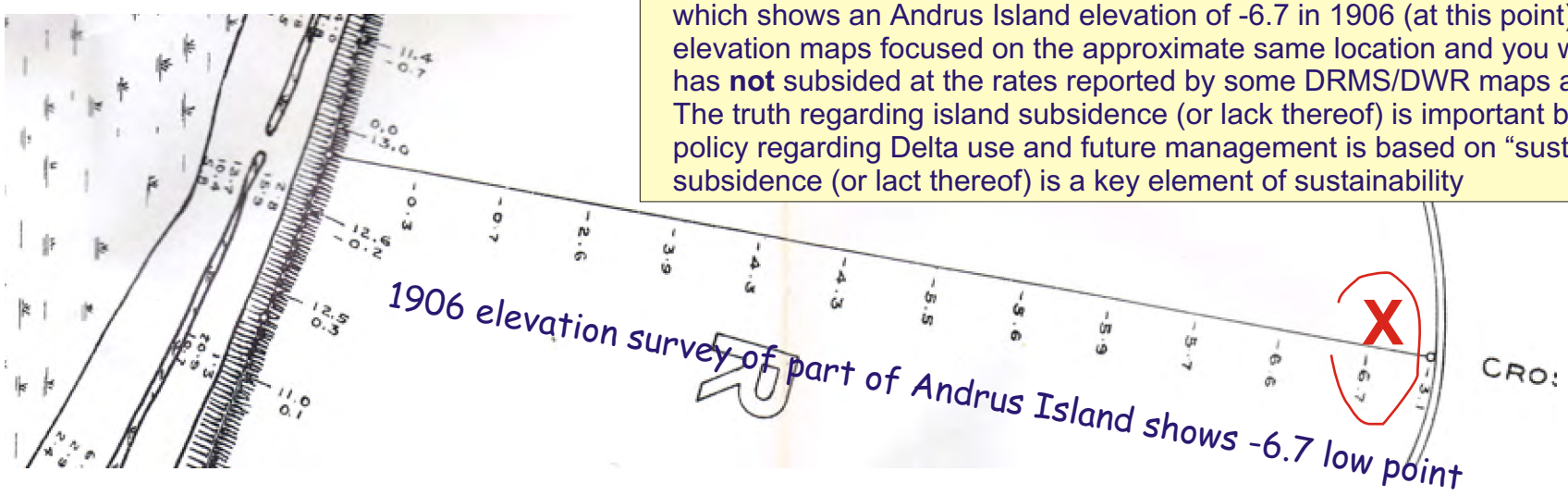
Thank you for consideration of my concerns. If documentation review locations are determined to be a benefit for the community in this process, I am volunteering the office at Snug Harbor as a viewing site during normal business hours, for residents of Ryer Island , if our reclamation district office is not available as a document viewing site.

Respectfully submitted:

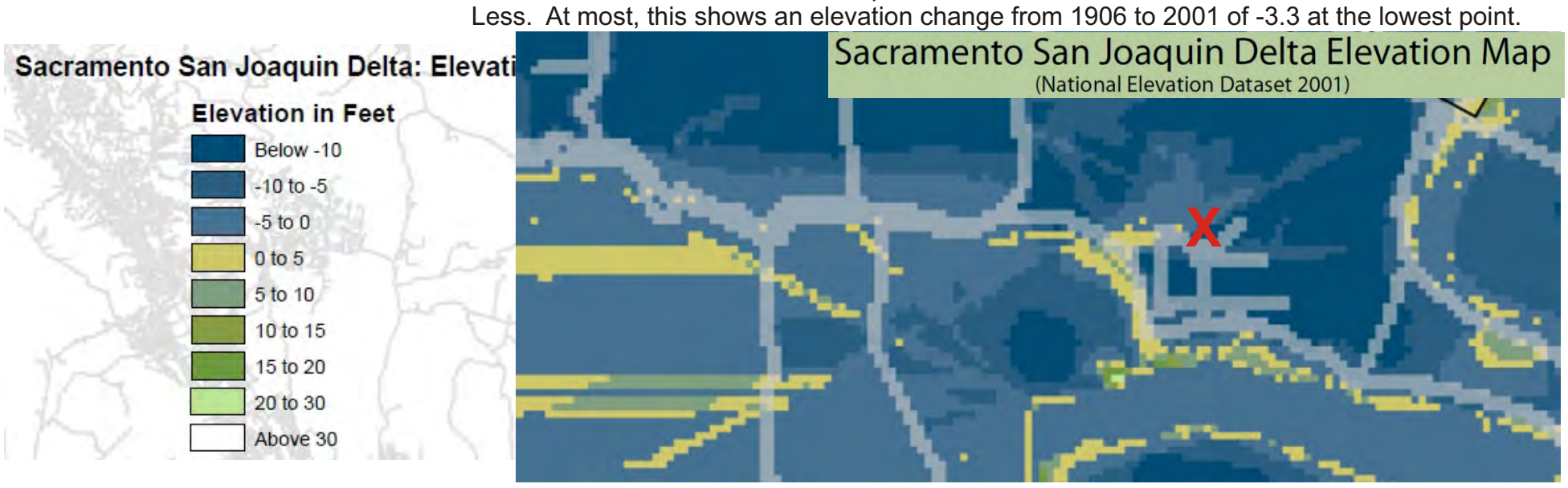
Nicole S. Suard, Esq., Managing Member, Snug Harbor Resorts, LLC
916-775-1455 sunshine@snugharbor.net

COMPARING ELEVATIN MAPS
1906 TO 2007 Focus: Andrus Island

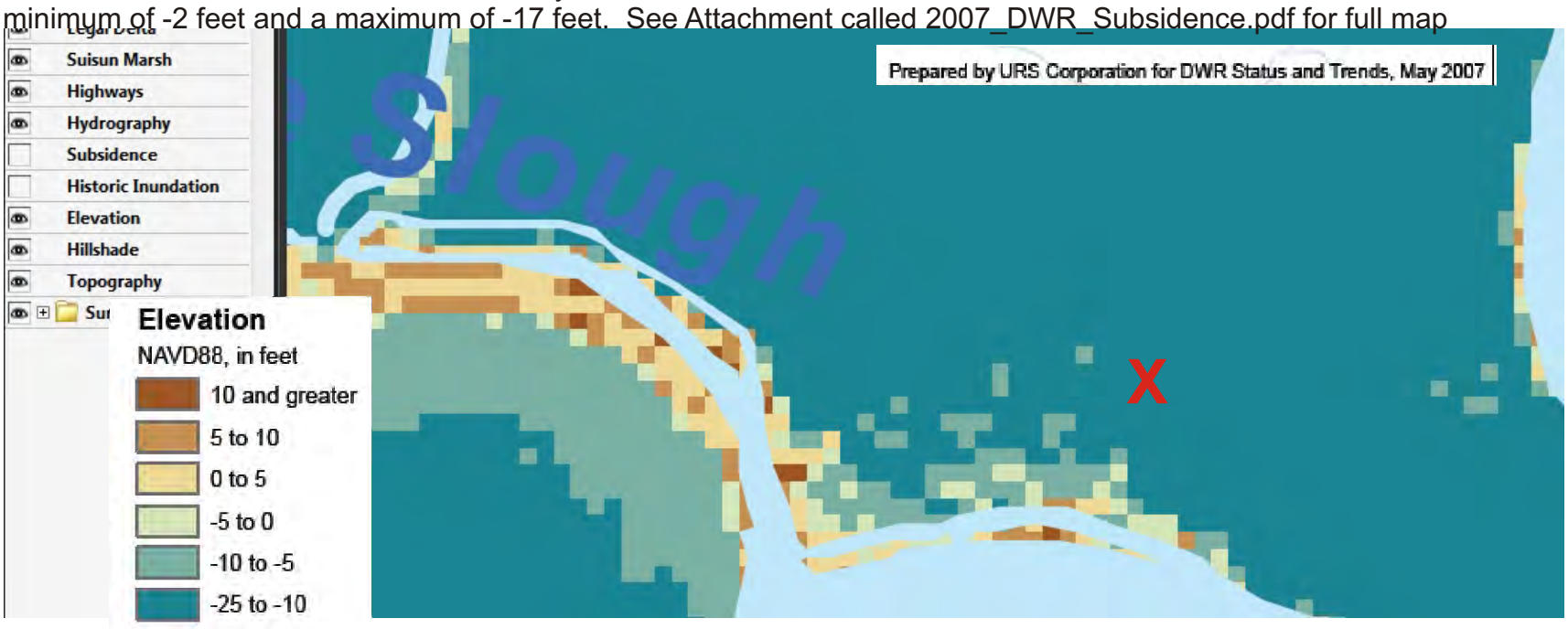
The first graphic below is a section of sheet 9 of the1906 official survey of the San Joaquin River for a report to the U.S. Congress. The red "x" was added to show location on Andrus Island on other maps below and on page 2. Compare this map, which shows an Andrus Island elevation of -6.7 in 1906 (at this point) with other elevation maps focused on the approximate same location and you will find this area has **not** subsided at the rates reported by some DRMS/DWR maps and studies. The truth regarding island subsidence (or lack thereof) is important because public policy regarding Delta use and future management is based on "sustainability" and subsidence (or lact thereof) is a key element of sustainability



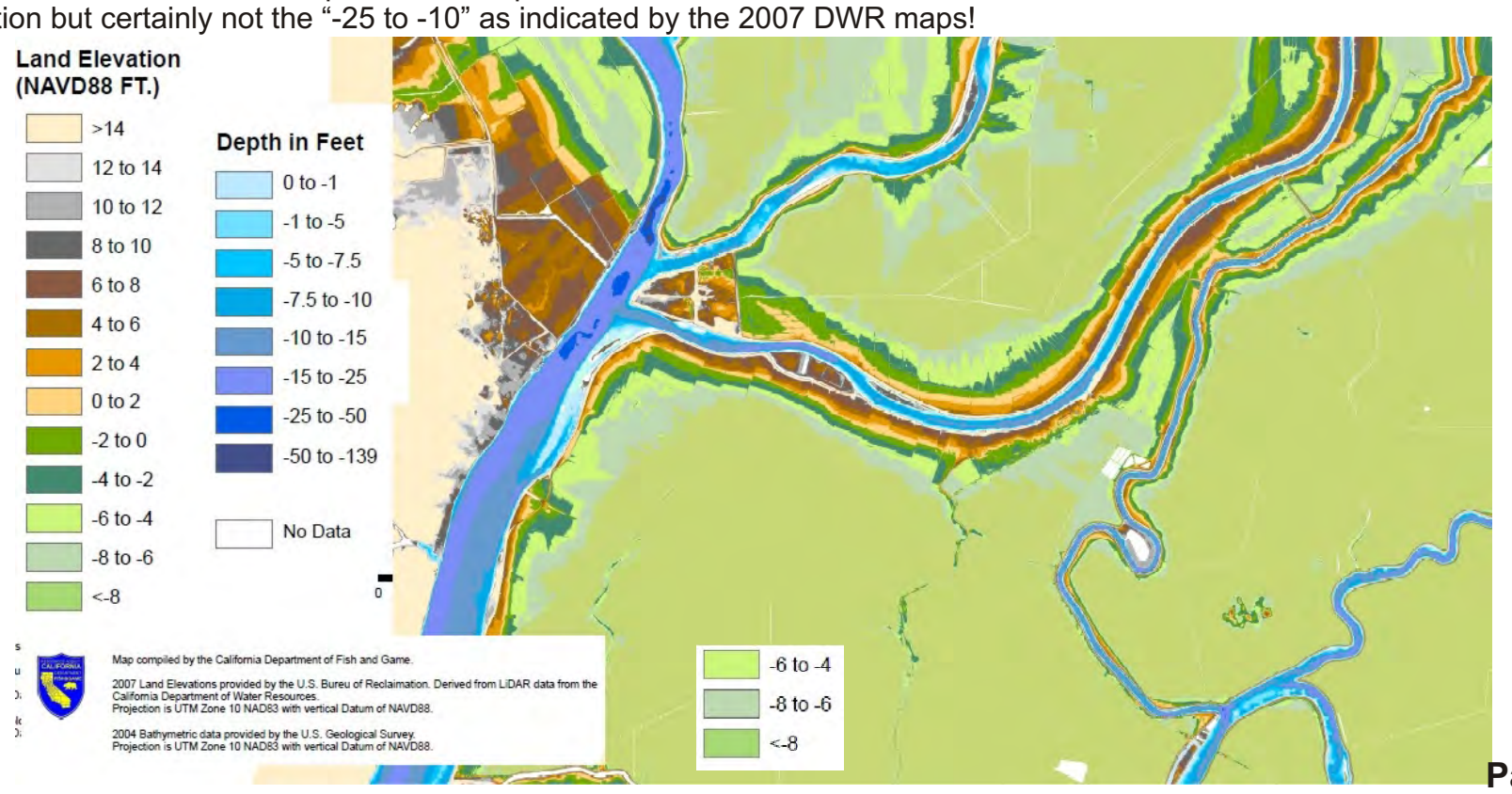
A section of this 2001 Elevation Map shows the same area of Andrus Island as -5 to -10 feet, or Less. At most, this shows an elevation change from 1906 to 2001 of -3.3 at the lowest point.



Here is an enlargement of the 2007 DWR/URS map which most observers would assume indicates this area of Andrus Island is -25 to -10 feet, which does not match any other elevation records found so far, and in fact inflates the elevation data a minimum of -2 feet and a maximum of -17 feet. See Attachment called 2007_DWR_Subsidence.pdf for full map

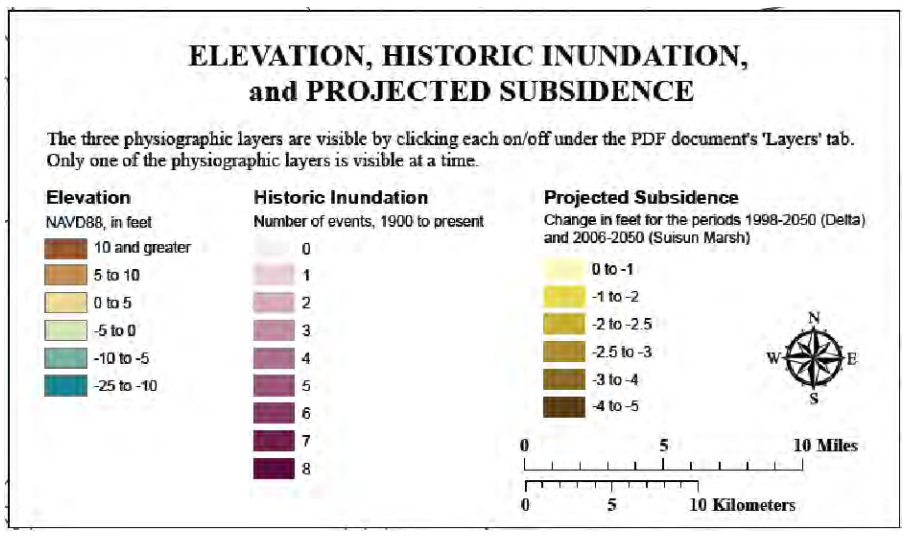


This 2007 is a section of the Fish & Game Yolo Bypass elevation map, which used increments of 2 feet. It did not cover the Andrus Island focus point, but comparison of land levels on Grand and Brannen would indicate -8 to -4 elevation but certainly not the "-25 to -10" as indicated by the 2007 DWR maps!

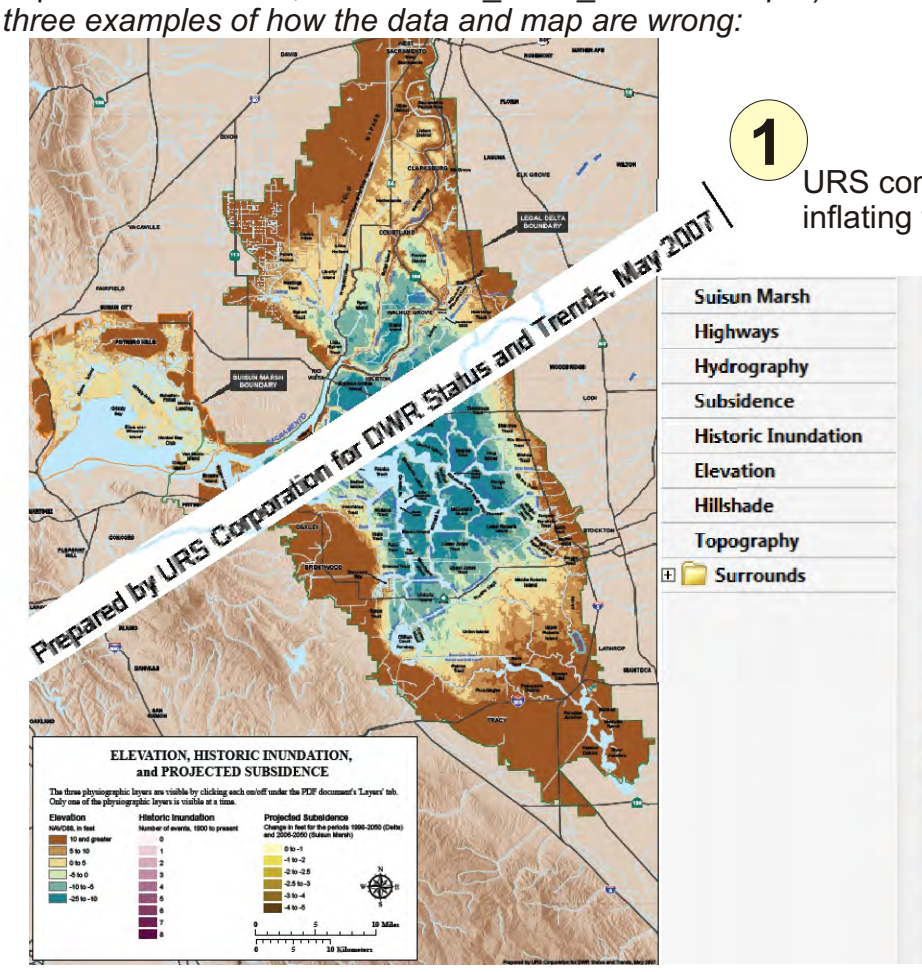


HOW MANY WAYS CAN A MAP BE WRONG?

The DWR 2007 Elevation, Historic Inundation and Projected Subsidence map (small size below) reports WRONG data for historic inundation and elevations, as shown the previous sheet. It also uses confusing map key increments for no known or explained reason. It is an interactive map found online that *looks* impressive but uses incorrect underlying data to produce the various maps depending on the selections made by the viewer. (Full map in pdf provided as separate attachment, *called 2007_DWR_subsidence.pdf*). *Here are three examples of how the data and map are wrong:*



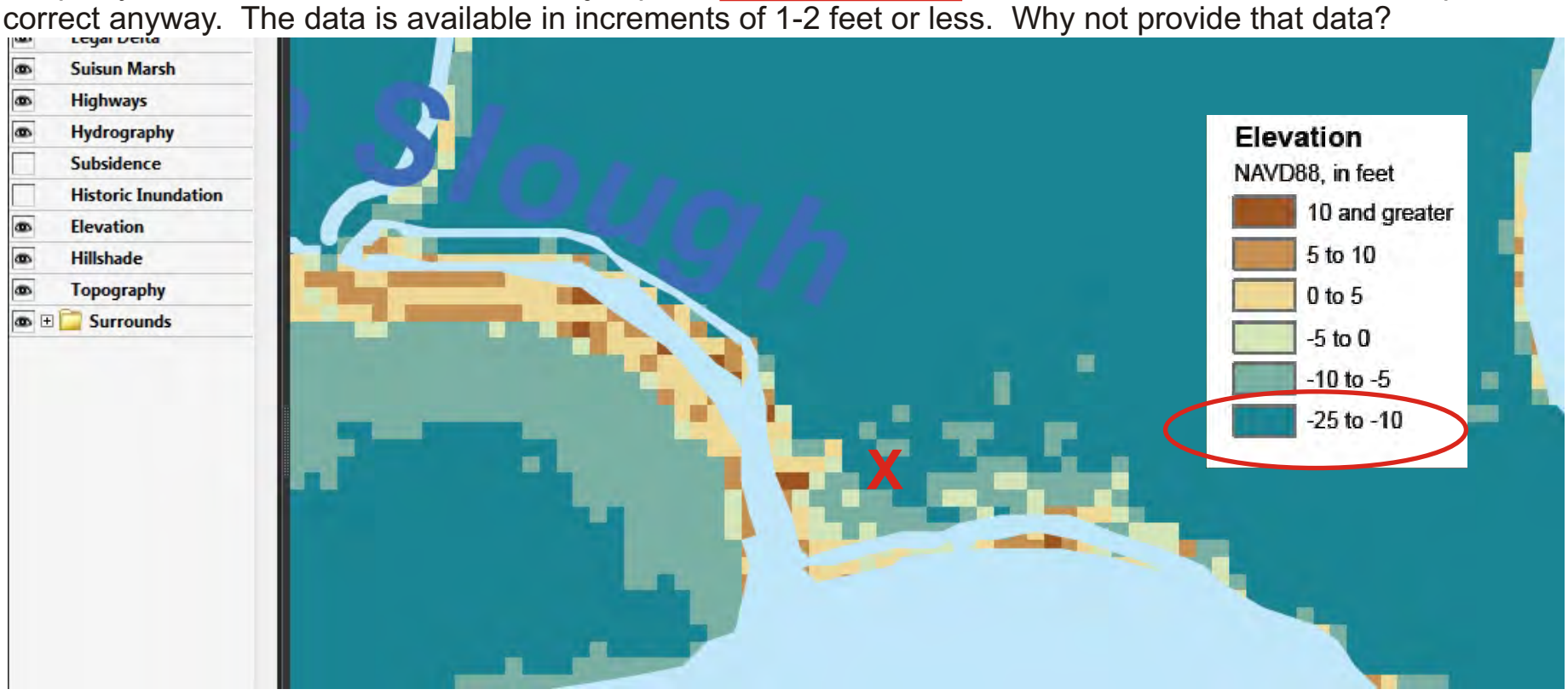
1



URS combines the records of 3 islands and reports it as a single island, thereby inflating the actual totals of all 3 islands. This is just one example.

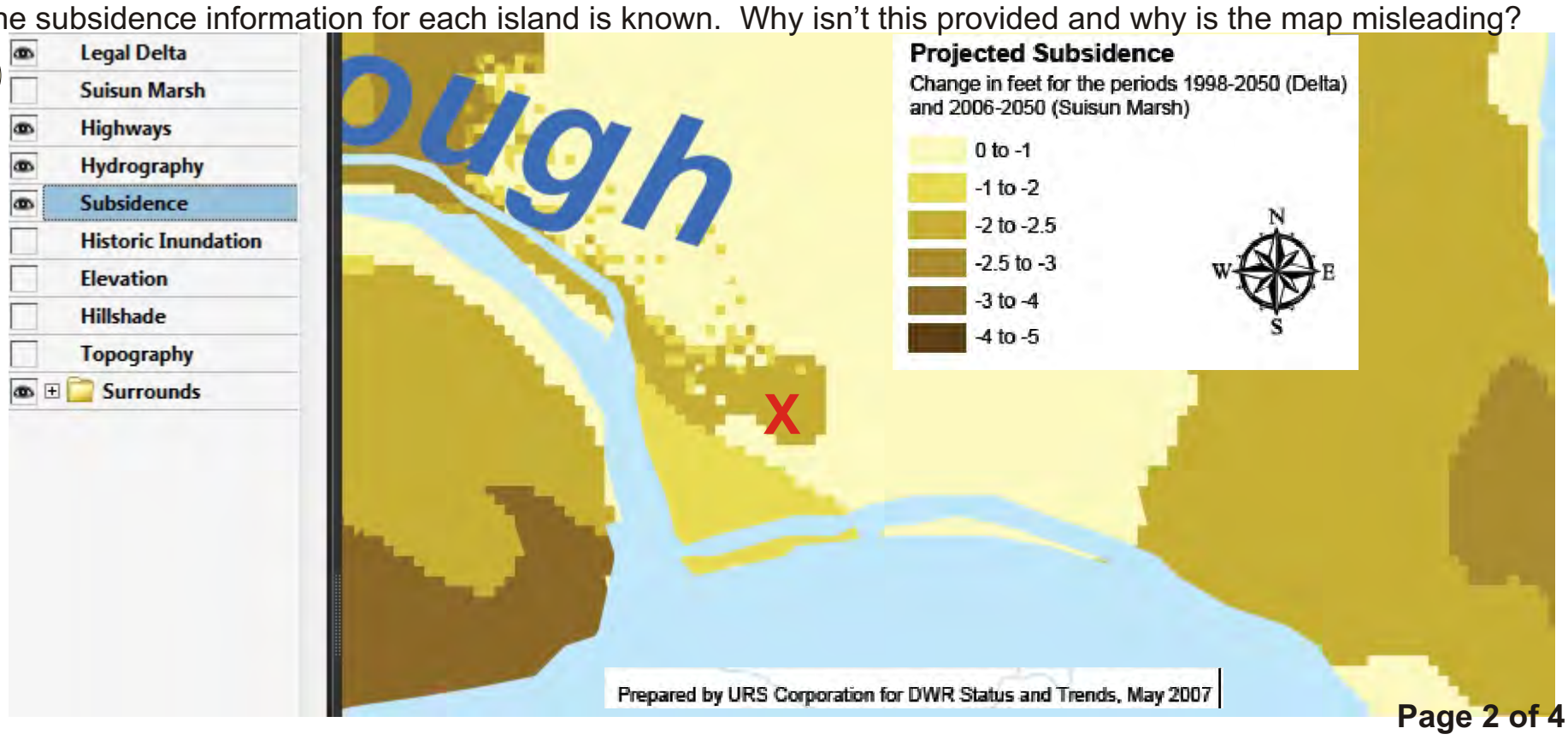
The map key uses increments of 5 feet, then jumps to 15 foot increment, and based on other elevation maps its not correct anyway. The data is available in increments of 1-2 feet or less. Why not provide that data?

2



When you ask for subsidence information, you get the "projection" for future subsidence, not the facts. However, the subsidence information for each island is known. Why isn't this provided and why is the map misleading?

3



Comment:
Reference information listed with the 2007 DWR/URS map which displays incorrect data for Delta Island Inundation History and current elevations. The logical assumption is that if the underlying data regarding historic flooding is wrong, and the underlying data regarding elevation changes over time is wrong, then most likely the projected subsidence map is also wrong. In any case, Mr. Dudas of DWR is aware of the data inconsistencies regarding island inundation histories, at a minimum, and says the data will be corrected and posted at DWR website.

METADATA FOR ELEVATION, HISTORIC INUNDATION, AND PROJECTED SUBSIDENCE

Elevation
Info: Elevation in the Delta-Suisun region
Source: IFSAR (NAVD 88, feet, March 2002) for the Delta and LIDAR (NAVD88, feet, September and October 2005) for Suisun Marsh
Date: 2002/2005
Contact: Sarah Lewis, URS Corporation
sarah_lewis@urscorp.com

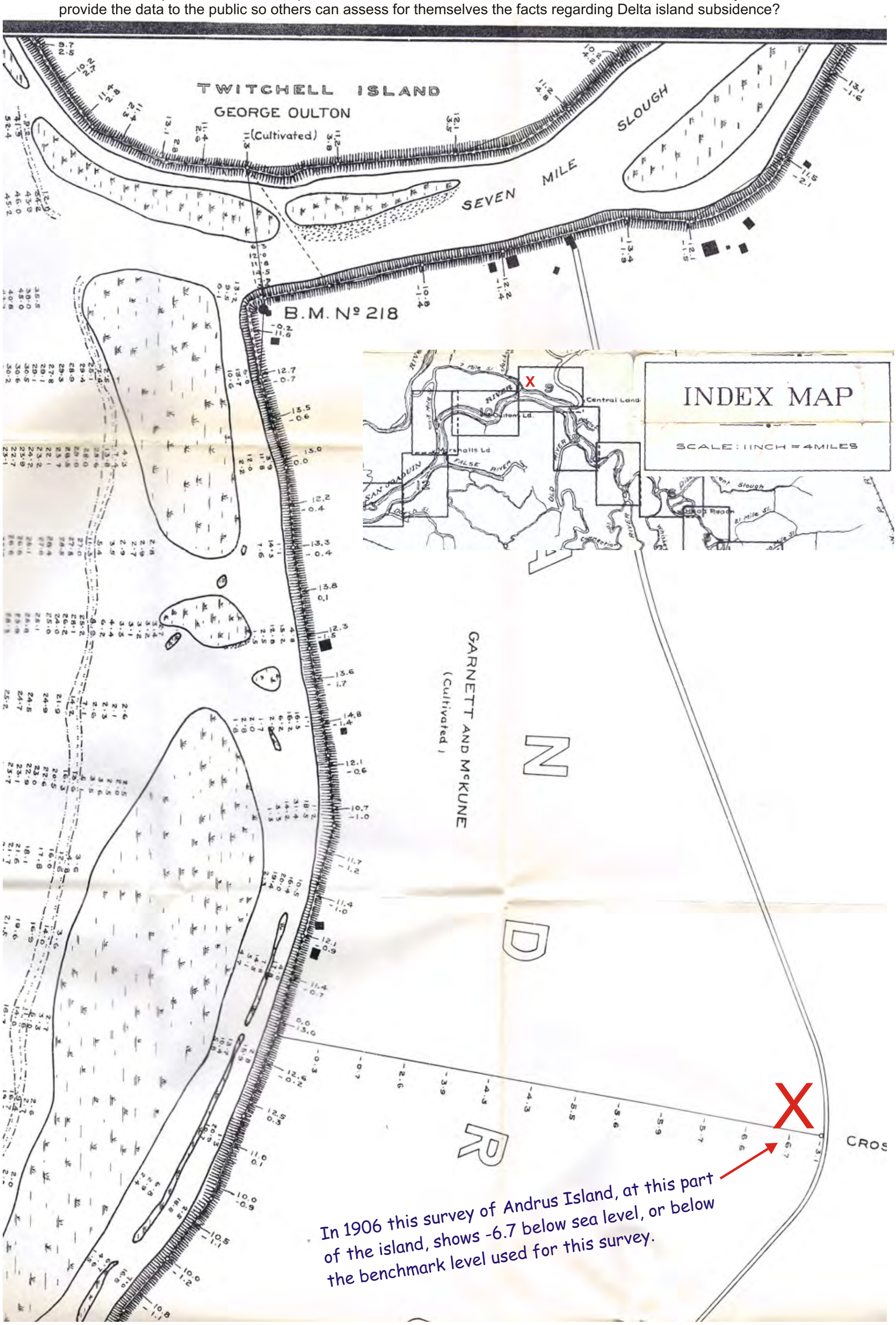
Historic Inundation
Info: Historic inundation of islands in the Delta region 1900 - Present
Source: URS Corporation 2006. Island inundation data provided by Joel Dudas of DWR to URS Corp (12 Jun 2006).
Date: 02/2007
Contact: Sarah Lewis, URS Corporation
sarah_lewis@urscorp.com

Projected Subsidence
Info: Delta region projected subsidence 1998-2050 and Suisun Marsh projected subsidence 2006-2050
Source: Supplied to URS by Dave Leighton of Hydrofocus (Jan 2007).
Date: 2007
Contact: Sarah Lewis, URS Corporation
sarah_lewis@urscorp.com

Legal Delta
Info: Legal Delta boundary version 2002.4 - delineates the legal Delta established under the Delta Protection Act (Section 12220 of the Water Code) passed in 1959.
Source: DWR Delta Levees Program.
Date: 04/2002
Contact: Joel Dudas, DWR

Suisun Marsh
Info: Suisun Marsh boundary
Source: "Suisun Marsh Protection Plan Map" published by San Francisco Bay Conservation and Development Commission in December of 1976.
Date: Paper - 1976; Digital - 2006
Contact: Amy Keeley, URS Corporation
amy_keeley@urscorp.com

Scan of one section of sheet 9 of the 1908 survey of the San Joaquin River, including island elevations. This full size scan is provided as an example of the information that is available to DWR and scientists; so why not provide the data to the public so others can assess for themselves the facts regarding Delta island subsidence?



This review of Sacramento San Joaquin Delta elevation maps was compiled by N. Suard for review of the Delta Stewardship Council, June 2010 meeting.

 Prior to 2010 the Real McCoy Ferry saw peak traffic of about 700 vehicles per day

TechnicalStudies.pdf (application/p... × | Caltrans, Traffic Operations Progr... ×

http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/2002all/r082-86i.htm

District	Route	County	PostMile Prefix	Post Mile	Description			Back Peak Hr	Peak Mo	AADT
4	84	ALA			(BREAK IN ROUTE)					
4	84	ALA	R	17.99	NORTH JCT. RTE. 680			2050	25000	24000
4	84	ALA		24.36	VINEYARD AVENUE	1700	20900	20100	1700	21500	20700
4	84	ALA		24.72	WETMORE ROAD	1700	21500	20700	1750	22500	21700
4	84	ALA		25.24	ALDEN LANE	1750	22500	21700	1850	24500	23600
4	84	ALA		26.91	LIVERMORE, STANLEY BOULEVARD	1800	24500	23600	2050	28500	27500
4	84	ALA		27.37	LIVERMORE, ARROYO ROAD (L STREET)	2000	27500	26500	2000	27500	26500
4	84	ALA	R	27.76	LIVERMORE, 2ND/1ST STREETS	2750	37000	36000	2800	37500	36500
4	84	ALA		28.65	LIVERMORE, PORTOLA AVENUE	2950	39500	38500	3000	40000	39000
4	84	ALA	R	29.71	LIVERMORE, JCT. RTE. 580	3650	49000	47500			
4	84	ALA			(BREAK IN ROUTE)						
4	84	SOL			SOLANO COUNTY						
4	84	SOL		0.13	RIO VISTA, JCT. RTE. 12				230	2700	2500
4	84	SOL		0.91	AIRPORT ROAD	190	2100	1950	130	1400	1300
4	84	SOL		2.49	CACHE SLOUGH FERRY	70	710	670	25	240	230
4	84	SOL		7.25	JCT. RTE. 220 EAST	15	160	150	30	310	230
4	84	SOL		12.08	MINER SLOUGH BRIDGE/RYER ROAD	35	360	280	40	390	300
4	84	SOL		13.67	SOLANO-YOLO COUNTY LINE	60	500	410			
3	84	YOL		0	SOLANO-YOLO COUNTY LINE, COUNTY ROAD 161						
3	84	YOL		4.57	COURTLAND ROAD						1100
								1450	150	1300	1250
					SABEL SLOUGH ROAD	180	1400	1200	190	1700	1600
3	84	YOL		18.04	WEST SACRAMENTO, DAVIS ROAD	190	1700	1600	440	3800	3500
3	84	YOL		18.62	WEST SACRAMENTO, HARMON ROAD	440	3800	3500	760	7100	6700
3	84	YOL		19.65	WEST SACRAMENTO, LINDEN ROAD	760	7100	6700	1900	19500	17200
3	84	YOL		19.85	WEST SACRAMENTO, ARLINGTON ROAD	1900	19500	17200	2000	20100	17900
3	84	YOL		20.2	WEST SACRAMENTO, DEVON ROAD	2050	20200	17900	2100	20400	17900
3	84	YOL		20.8	WEST SACRAMENTO, STONE BOULEVARD	2350	23700	20500	1950	19900	16900
3	84	YOL		21.37	WEST SACRAMENTO, 15TH STREET	2000	20400	17300	2150	23300	19600
3	84	YOL	R	21.78	WEST SACRAMENTO, JCT. RTE. 50	2050	23900	20800	2500	27500	26000
3	84	YOL		21.84	WEST SACRAMENTO, JCT. RTE. 275 EAST	2500	27500	26000	1500	16000	15400
3	84	YOL		22.06	WEST SACRAMENTO, WEST CAPITOL AVENUE	2100	22500	21400	2050	21000	20200
3	84	YOL		22.5	WEST SCARAMENTO, TRIANGLE COURT/F STREET	2000	20000	19400	1950	22000	20200
3	84	YOL		22.68	WEST SACRAMENTO, KEGLE/ SACRAMENTO AVENUES	1950	22000	20200	1650	15300	15100
3	84	YOL		23.47	WEST SACRAMENTO, SUNSET STREET	1400	13300	12900	1250	11700	11100
3	84	YOL		23.67	WEST SACRAMENTO, HARBOR BOULEVARD	1250	11700	11100	1700	17400	16200

CACHE SLOUGH FERRY 70 710 670 25 240 230

Flood map inconsistencies

September 2, 2008

Comparative study of the data and sources used for the Delta Vision Plan, specifically the studies regarding flooding and seismic activity protections. **DRAFT**

Information compiled by Nicole, S. Suard, Esq., Snug Harbor Resorts, LLC for discussion purposes until written verification is received.

Preliminary findings to be verified:

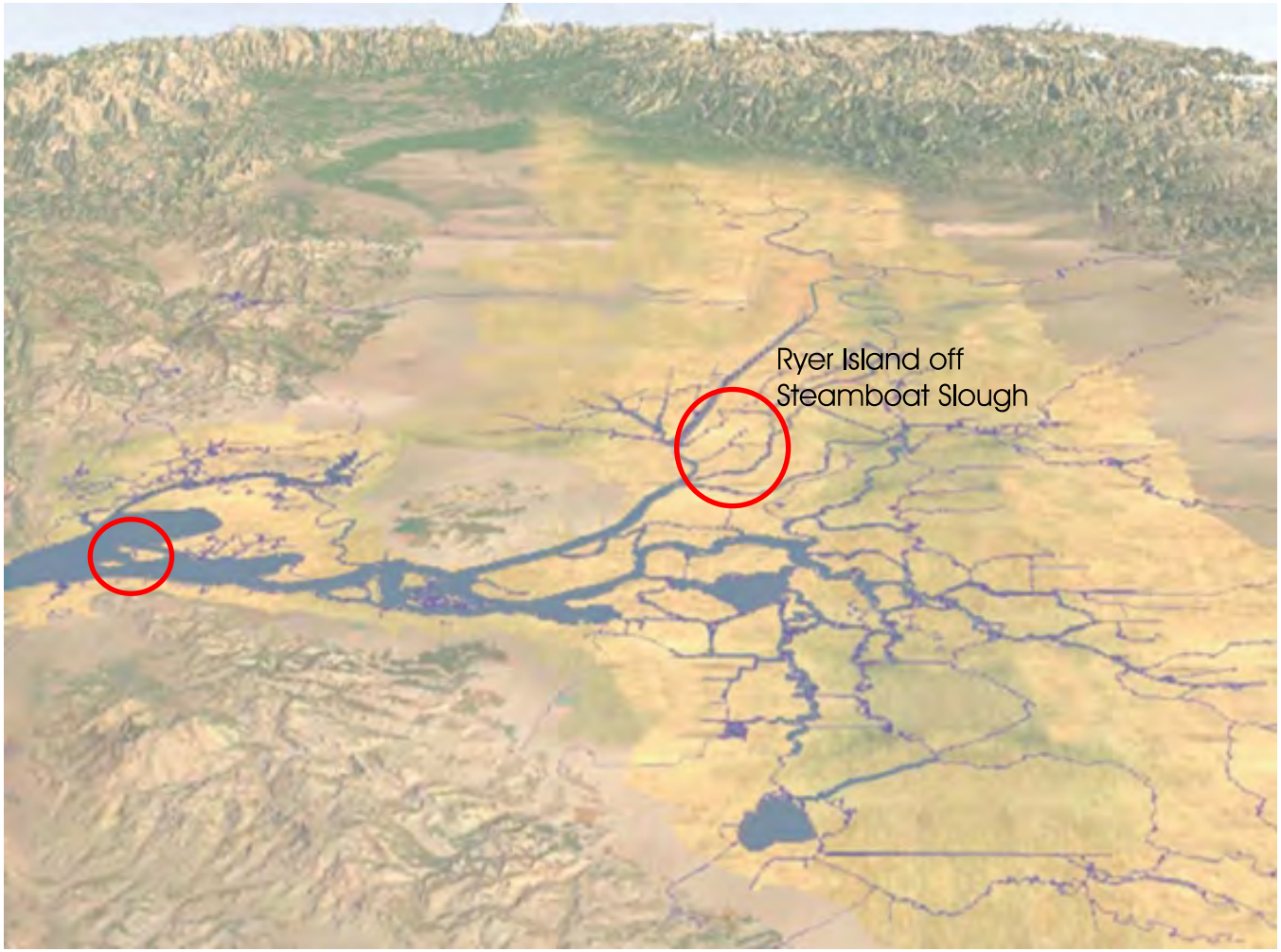
1. **There are two islands named Ryer located in Solano County.** One island is located in the Suisun/Grizzley Bay area and the other is borderer by Cache and Steamboat Sloughs. The duplication of island names may have led to inadvertent incorrect application of data regarding one island applied to the other island.
2. **Seismic activity reports**: Some of the reports referenced by the Delta Vision use data regarding Ryer Island in the Suisun/Grizzley Marsh area, yet apply the same data to the OTHER Ryer Island off Steamboat Slough, contrary to similar governmental reports.
3. **Flood hazzard reports**: Flood hazzard map data does not appear to match reports regarding risk of flood activity in the Delta for the Steamboat Slough Ryer Island area, based on records of actual floods over the last 100+ years.

Why is this important now?

Decisions regarding the future of the island of the Delta are under discussion. Decisions should be made based on accurate information in all cases. Since it appears at least some of the data for one island was transposed to the other island, it makes sense to take the time to verify the information is correct prior to making final decisions regarding either of the Ryer Islands in Solano County.

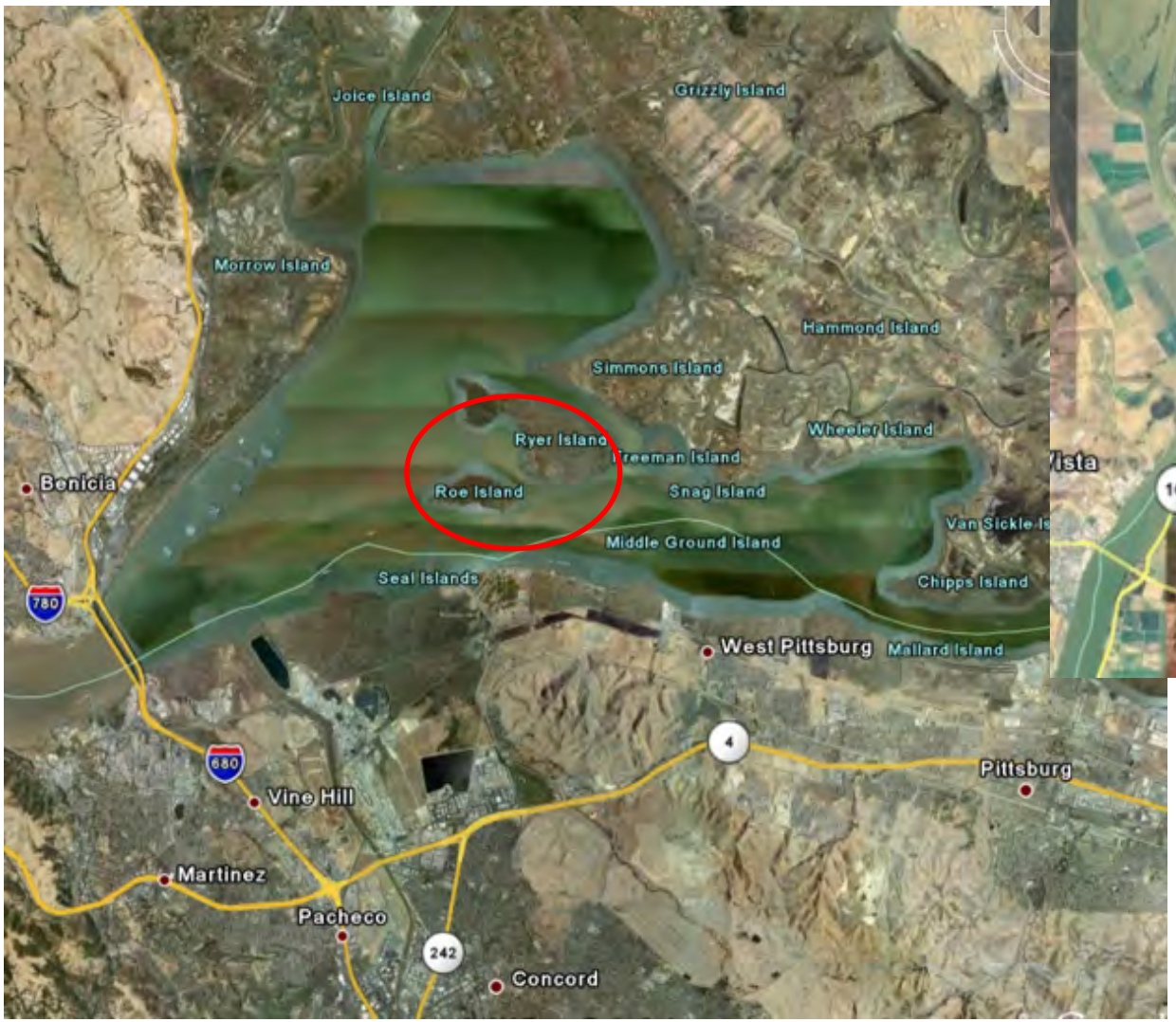
According to local records, Ryer Island in the Suisun Bay has flooded, but Ryer Island off Steamboat Slough does NOT have flooding records over the last 100 years.

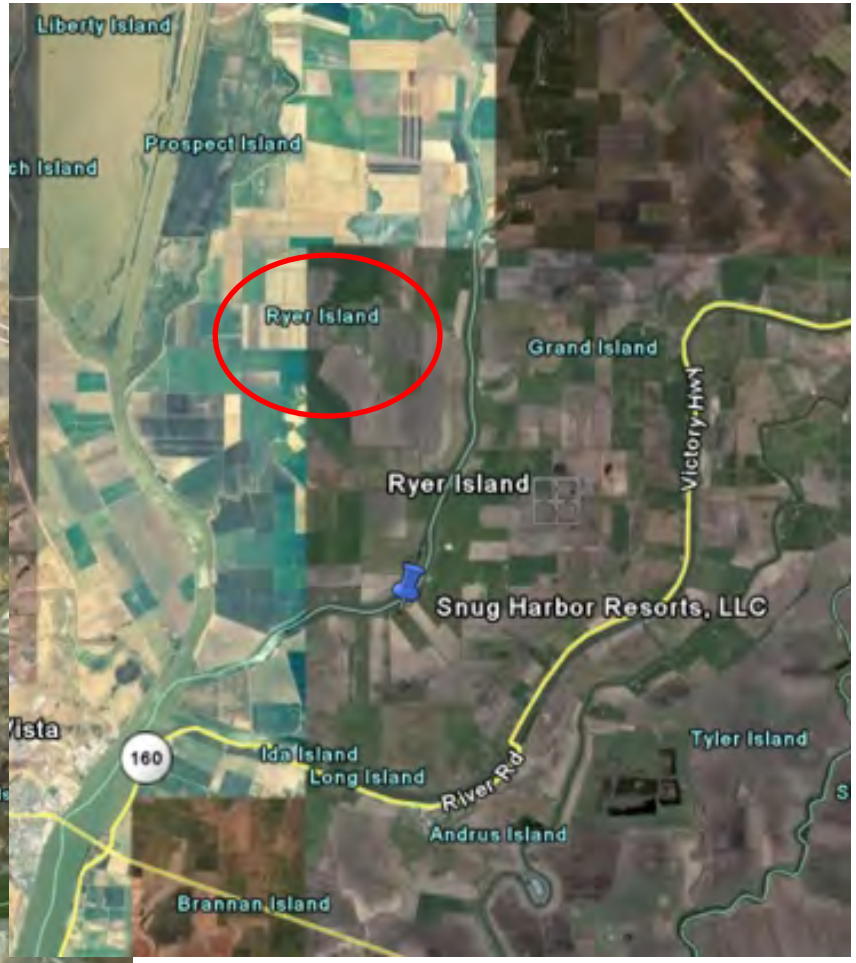
Ryer Island in Suisun Bay

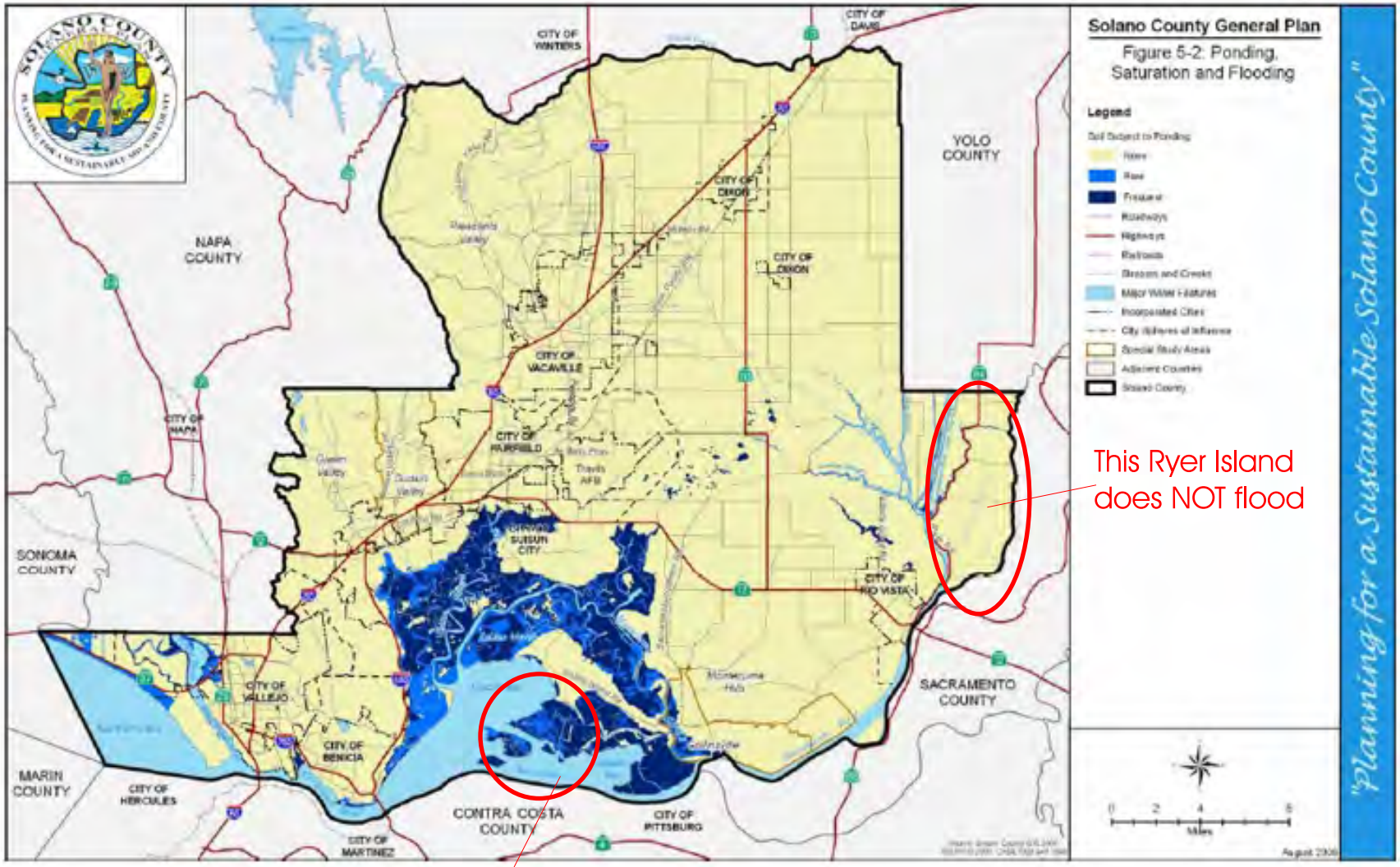


Two Ryer Islands in Solano County

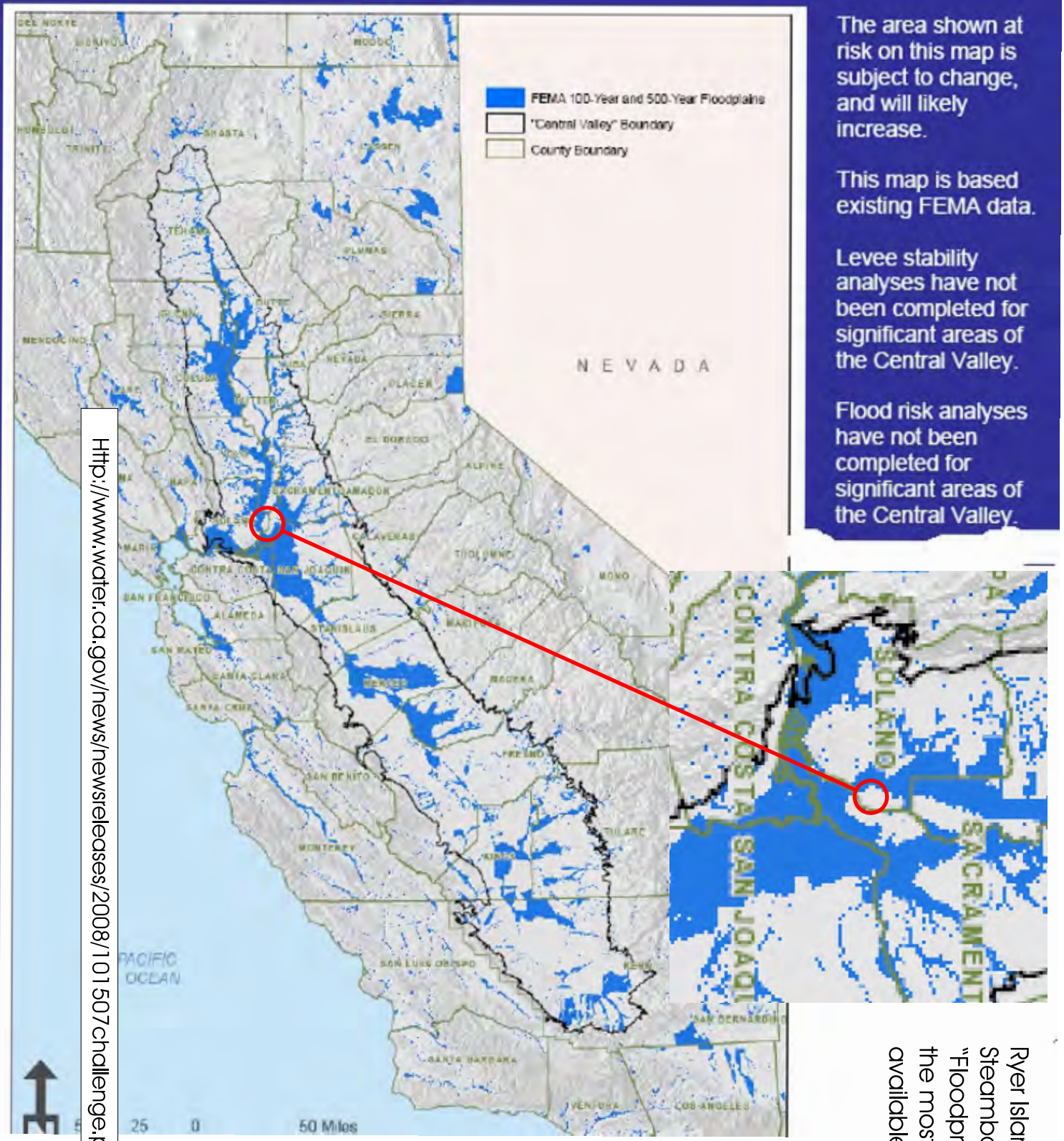
Ryer Island in Grizzley Bay/Suisun area
Ryer Island off Cashe Slough and Steamboat Slougy






Solano County General Plan
Figure 5-2: Ponding, Saturation and Flooding
Legend
"Planning for a Sustainable Solano County"
CITY OF WINTERS
CITY OF DAVIS
YOLO COUNTY
CITY OF DIXON
NAPA COUNTY
CITY OF VACAVILLE
CITY OF FAIRFIELD
CITY OF NAPA
SONOMA COUNTY
CITY OF SUISUN CITY
CITY OF RIO VISTA
SACRAMENTO COUNTY
CITY OF VALLEJO
CITY OF BENICIA
MARIN COUNTY
CITY OF HERCULES
CONTRA COSTA COUNTY
CITY OF PITTSBURG
CITY OF MARTINEZ
This Ryer Island does NOT flood
This Ryer Island is prone to flooding based on records

Floodprone Areas in the Central Valley



The area shown at risk on this map is subject to change, and will likely increase.

This map is based existing FEMA data.

Levee stability analyses have not been completed for significant areas of the Central Valley.

Flood risk analyses have not been completed for significant areas of the Central Valley.

Http://www.water.ca.gov/news/newsreleases/2008/101507challenge.pdf

Ryer Island off Cache & Steamboat Slough is NOT "Floodprone" based on the most recent maps available

Table B.1 - Summary of Annual Failure Probabilities for Delta Islands

Zone	NAME	Flood	Seismic	Flood + Seismic	Flood PL 84-99	PL 84-99 Flood + Seismic	PL 84-99 + 1' Raise Flood	PL 84-99 +1' Raise Flood + Seismic
Central	Bacon Island	0.04	0.02	0.06	0.04	0.06	0.03	0.05
Central	Bouldin Island	0.06	0.03	0.09	0.05	0.08	0.05	0.08
Central	Empire Tract	0.04	0.02	0.06	0.04	0.06	0.03	0.05
Central	Mandeville Is.	0.04	0.03	0.07	0.04	0.06	0.03	0.06
Central	McDonald	0.02	0.03	0.05	0.02	0.05	0.02	0.05
Central	Medford Is.	0.03	0.02	0.05	0.03	0.05	0.02	0.04
Central	Quimby Island	0.04	0.03	0.07	0.04	0.06	0.03	0.06
Central	Rindge Tract	0.01	0.02	0.03	0.01	0.03	0.01	0.03
Central	Venice Island	0.07	0.04	0.11	0.06	0.10	0.06	0.09
Eastern	King Island	0.01	0.01	0.02	0.01	0.02	0.01	0.02
Eastern	Terminous	0.04	0.01	0.05	0.04	0.05	0.03	0.04
Eastern	Wright-Elmwood	0.01	0.01	0.02	0.01	0.02	0.01	0.02
Northern	Brack Tract	0.04	0.01	0.05	0.04	0.05	0.03	0.04
Northern	Canal Ranch	0.04	0.02	0.06	0.04	0.06	0.03	0.05
Northern	Dead Horse	0.03	0.01	0.04	0.03	0.04	0.02	0.03
Northern	Grand Island	0.02	0.05	0.07	0.02	0.07	0.02	0.07
Northern	Bethel Island	0.04	0.04	0.08	0.04	0.07	0.03	0.07
Northern	Ryer Island	0.02	0.03	0.05	0.02	0.05	0.02	0.05
Northern	Staten Island	0.04	0.03	0.07	0.04	0.06	0.03	0.06
Northern	Tyler Island	0.04	0.05	0.09	0.04	0.08	0.03	0.08
Southern	Coney Island	0.02	0.02	0.04	0.02	0.04	0.02	0.04
Southern	Jones Tract	0.05	0.03	0.08	0.05	0.07	0.04	0.07
Southern	Orwood Tract	0.03	0.01	0.04	0.03	0.04	0.02	0.04
Southern	Palm Tract	0.05	0.03	0.08	0.05	0.07	0.04	0.07
Southern	Roberts Island	0.03	0.03	0.06	0.03	0.06	0.02	0.05
Southern	Union Island	0.01	0.03	0.04	0.01	0.04	0.01	0.04
Southern	Victoria Island	0.03	0.03	0.06	0.03	0.06	0.02	0.05
Southern	Woodward	0.01	0.03	0.04	0.01	0.04	0.01	0.04
Western	Bradford Is.	0.04	0.05	0.09	0.04	0.08	0.03	0.08
Western	Brannan-Andrus Is.	0.03	0.05	0.08	0.03	0.08	0.02	0.07
Western	Holland Tract	0.05	0.03	0.08	0.05	0.07	0.04	0.07
Western	Hotchkiss	0.01	0.03	0.04	0.01	0.04	0.01	0.04
Western	Jersey Island	0.05	0.05	0.10	0.05	0.09	0.04	0.09
Western	Sherman Is.	0.02	0.05	0.07	0.02	0.07	0.02	0.07
Western	Twitchell Is.	0.03	0.05	0.08	0.03	0.08	0.02	0.07
Western	Webb Tract	0.05	0.05	0.10	0.05	0.09	0.04	0.09

* Which Ryer Island?

Source: Author calculations, using data from Draft DRMS Phase 1 Risk Analysis (J.R. Benjamin and Associates, 2007).

Notes: "PL 84-99" denotes scenarios in which levees are upgraded to meet the higher federal levee

September 2, 2008

Seismic map inconsistencies

Comparative study of the data and sources used for the Delta Vision Plan, specifically the studies regarding flooding and seismic activity protections. **DRAFT**

Information compiled by Nicole, S. Suard, Esq., Snug Harbor Resorts, LLC for discussion purposes until written verification is received.

Preliminary findings to be verified:

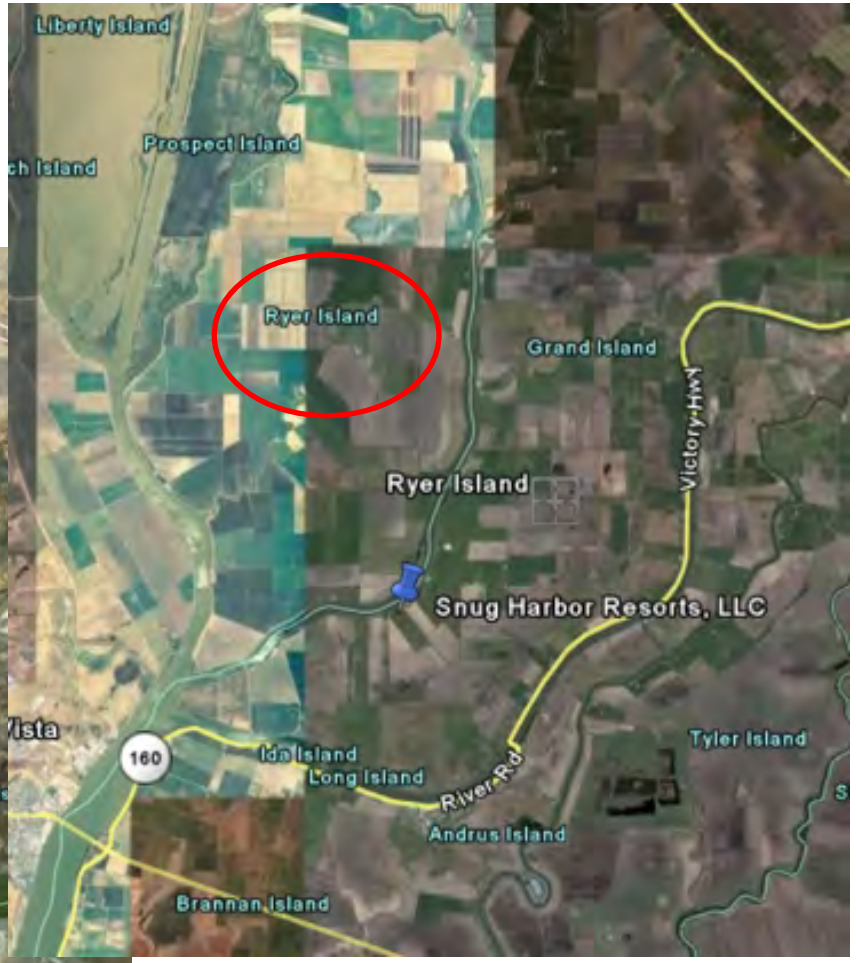
1. **There are two islands named Ryer located in Solano County.** One island is located in the Suisun/Grizzley Bay area and the other is borderer by Cache and Steamboat Sloughs. The duplication of island names may have led to inadvertent incorrect application of data regarding one island applied to the other island.
2. **Seismic activity reports**: Some of the reports referenced by the Delta Vision use data regarding Ryer Island in the Suisun/Grizzley Marsh area, yet apply the same data to the OTHER Ryer Island off Steamboat Slough, contrary to similar governmental reports.
3. **Flood hazzard reports**: Flood hazzard map data does not appear to match reports regarding risk of flood activity in the Delta for the Steamboat Slough Ryer Island area, based on records of actual floods over the last 100+ years.

Why is this important now?

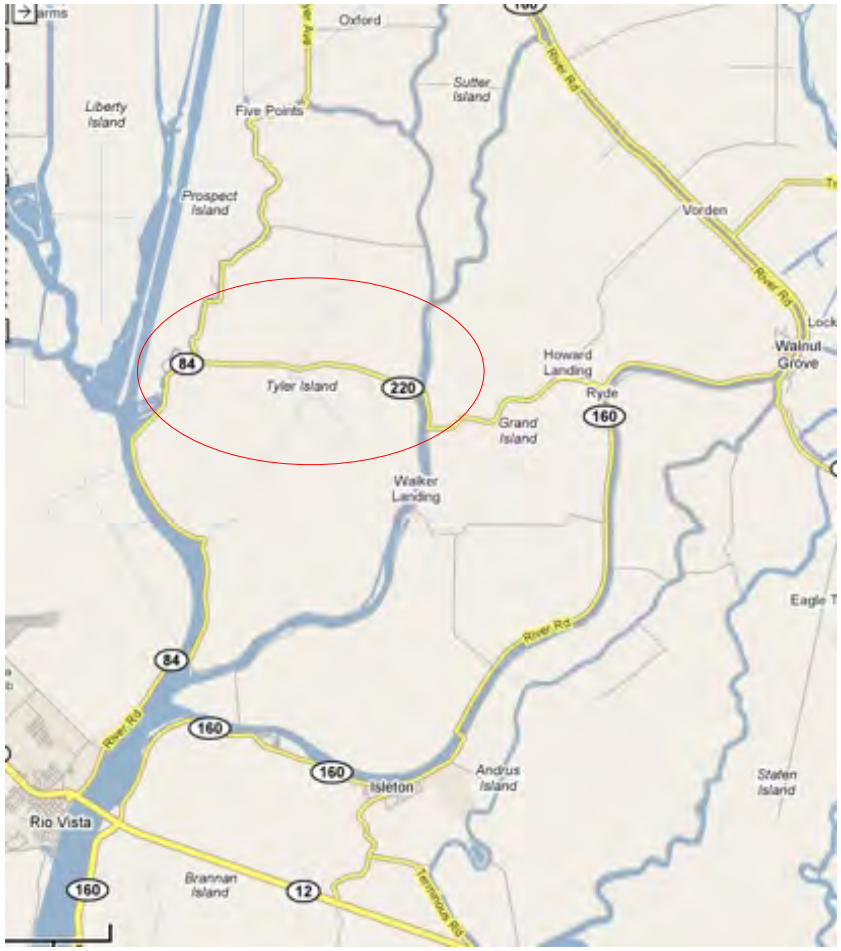
Decisions regarding the future of the island of the Delta are under discussion. Decisions should be made based on accurate information in all cases. Since it appears at least some of the data for one island was transposed to the other island, it makes sense to take the time to verify the information is correct prior to making final decisions regarding either of the Ryer Islands in Solano County.

Two Ryer Islands in Solano County

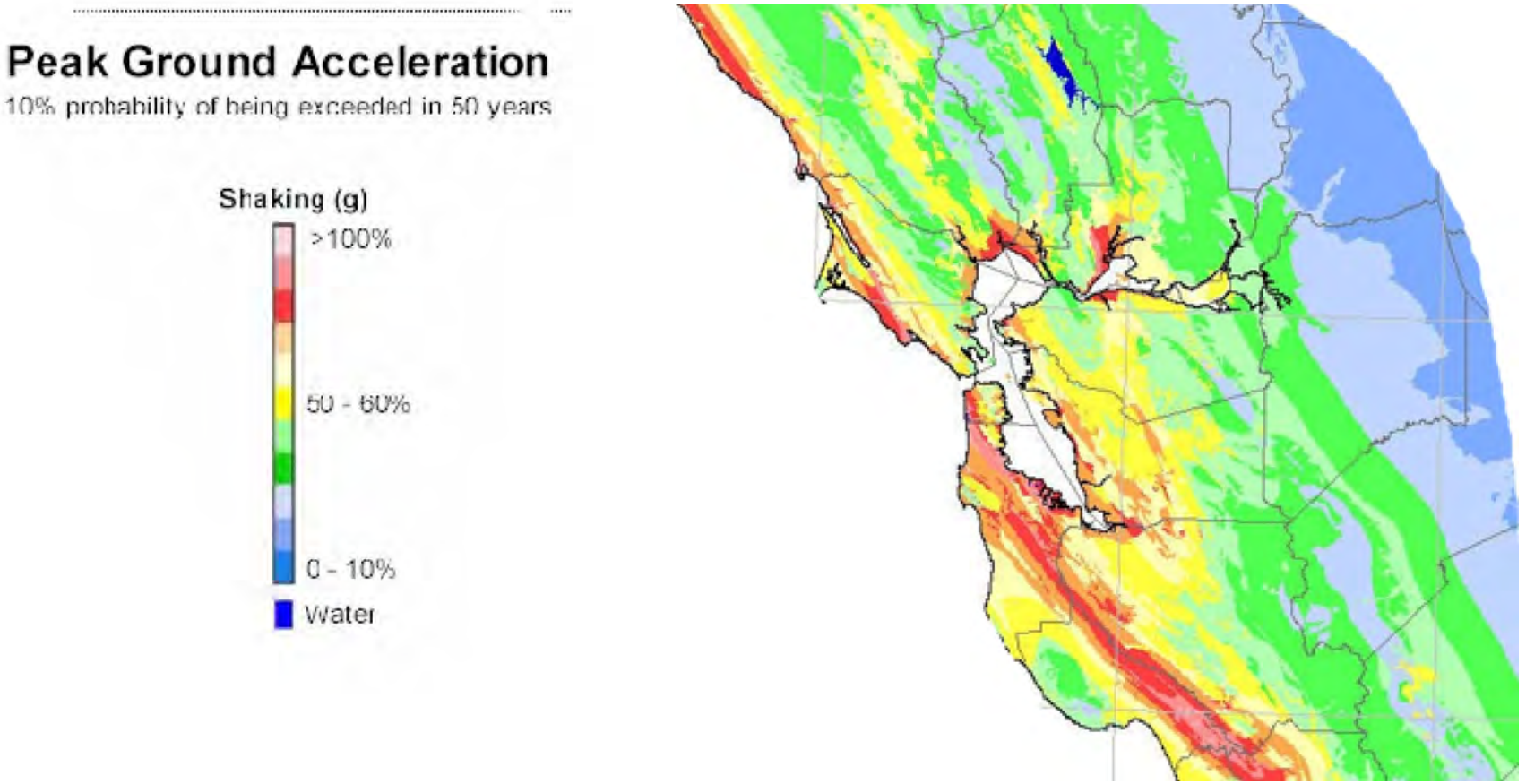
Ryer Island in Grizzley Bay/Suisun area
Ryer Island off Cashe Slough and Steamboat Slougy



Even though Google currently lists the island by Cashe and Steamboat Sloughs as "Tyler Island", virtually all other maps do recognize the island as Ryer, as noted in last page.



Http://www.conservation.ca.gov/cgs/rghm/psha/Pages/pga.aspx



Ryer Island off Suisun/Grizzley Bay

Department of Conservation

California Geological Survey

California Geological Survey

Probabilistic Seismic Hazards Assessment Page

Earthquakes (Recent & Historic)

California Fault Database

Loss Estimation

Aquist-Priolo Earthquake Fault Zoning Act

Seismic Shaking Hazard Maps of California

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Site Map

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submit

Search This Site

Probabilistic Seismic Hazards Mapping Ground Motion Page

User Selected Site

Longitude	-122.0148
Latitude	38.0877

Ground Motions for User Selected Site

Ground motions (10% probability of being exceeded in 50 years) are expressed as a fraction of the acceleration due to gravity (g). Three values of ground motion are shown, peak ground acceleration (Pga), spectral acceleration(Sa) at short (0.2 second) and moderately long (1.0 second) periods. Ground motion values are also modified by the local site soil conditions. Each ground motion value is shown for 3 different site conditions: firm rock (conditions on the boundary between site categories B and C as defined by the building code), soft rock (site category C) and alluvium (site category D).

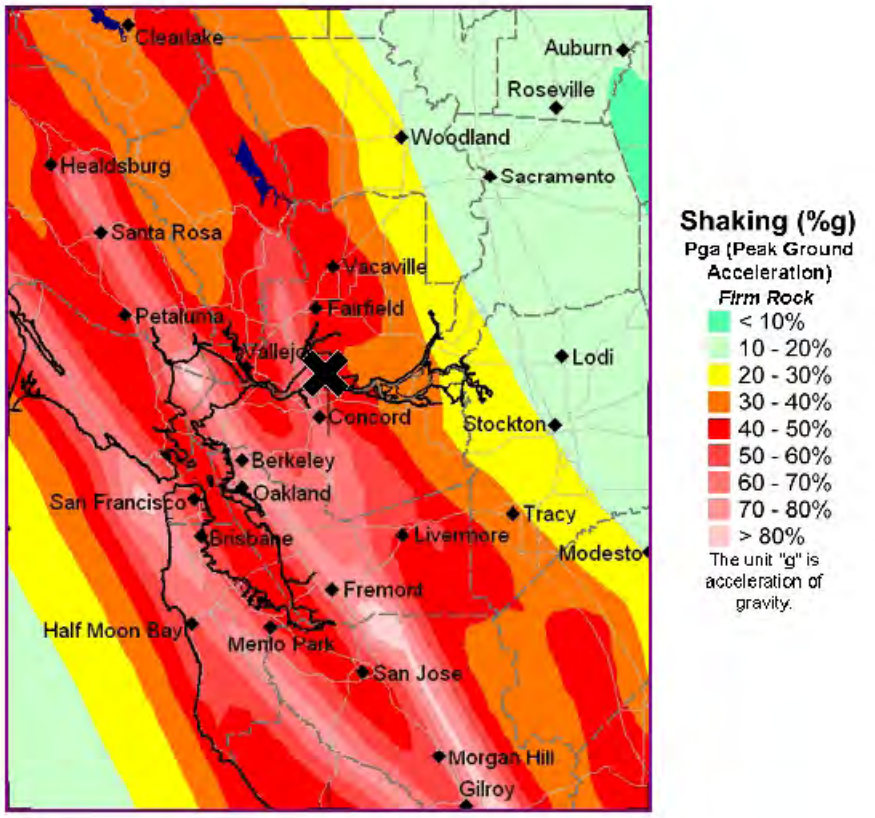
Ground Motion	Firm Rock	Soft Rock	Alluvium
Pga	0.492	0.492	0.496
Sa 0.2 sec	1.168	1.168	1.206
Sa 1.0 sec	0.391	0.479	0.568

NEHRP Soil Corrections were used to calculate Soft Rock and Alluvium.
Ground Motion values were interpolated from a grid (0.05 degree

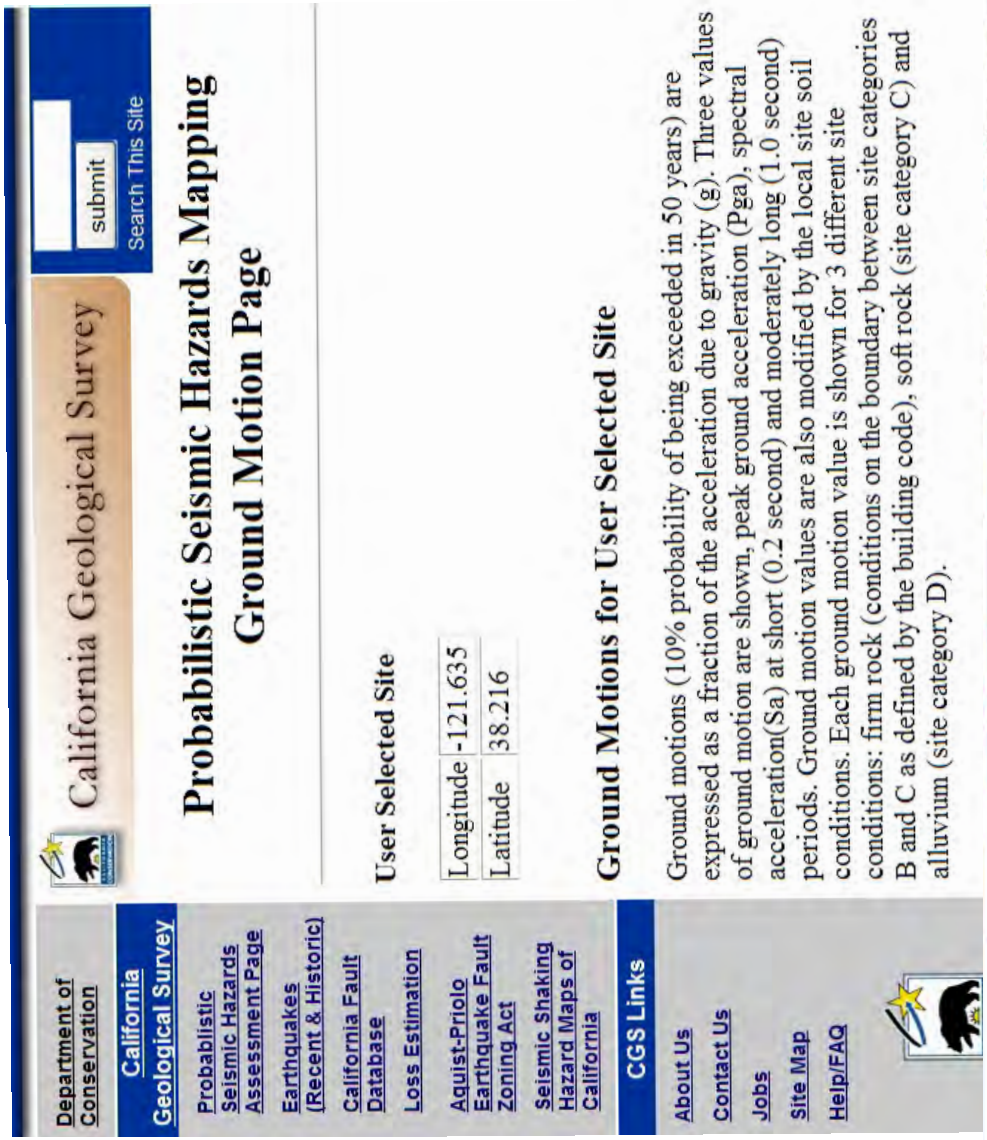
Ground Motion	Firm Rock	Soft Rock	Alluvium
Pga	0.492	0.492	0.496
Sa 0.2 sec	1.168	1.168	1.206
Sa 1.0 sec	0.391	0.479	0.568

NEHRP Soil Corrections were used to calculate Soft Rock and Alluv
Ground Motion values were interpolated from a grid (0.05 degree spacing)
of calculated values. Interpolated ground motion may not equal val
calculated for a specific site, therefore these values are not intende

design or analysis.



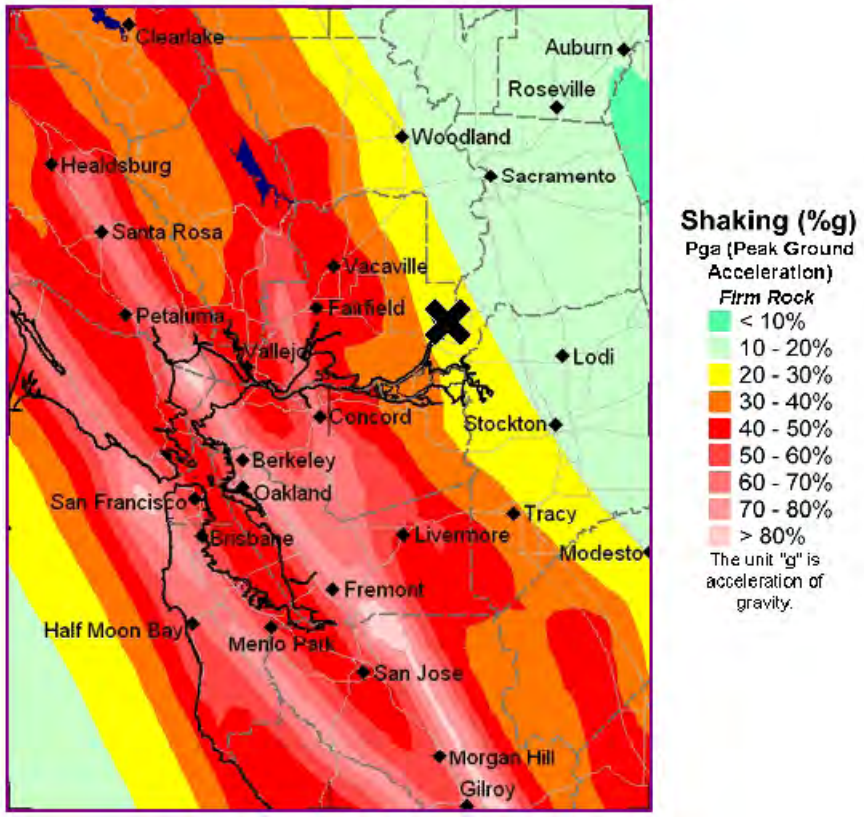
Ryer Island off Cache & Steamboat Slough



Ground Motion	Firm Rock	Soft Rock	Alluvium
Pga	0.245	0.267	0.306
Sa 0.2 sec	0.586	0.641	0.74
Sa 1.0 sec	0.212	0.268	0.351

NEHRP Soil Corrections were used to calculate Soft Rock and Alluvium.
Ground Motion values were interpolated from a grid (0.05 degree spacing)
of calculated values. Interpolated ground motion may not equal values calculated for a specific site, therefore these values are not intended for

design or analysis.



California Geological Survey

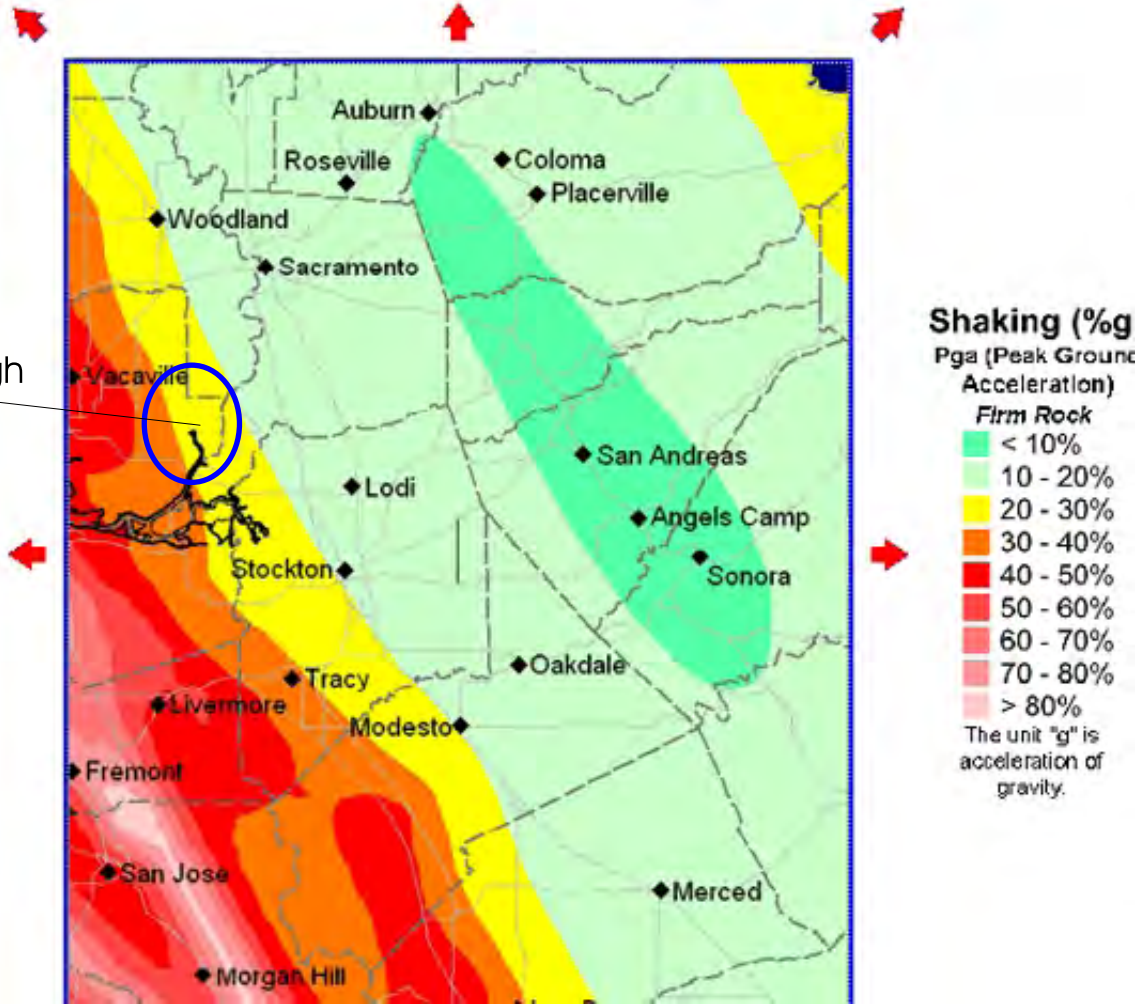
submit

Search This Site

Interactive Ground Motion Map - Centered on 121° W (Longitude); 38° N (Latitude)

Peak Ground Acceleration - 10% of being exceeded in 50 years

Ryer Island by Steamboat Slough

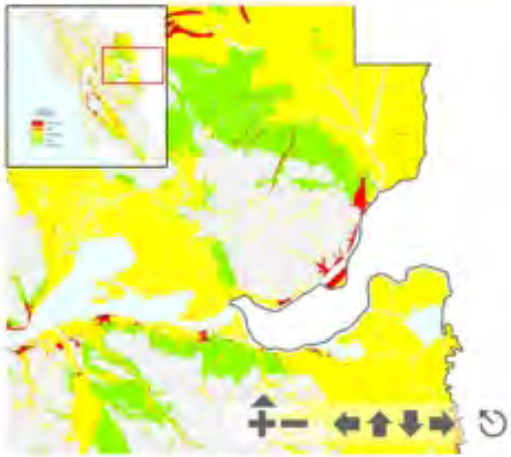


SFBR Home
Liquefaction Menu
Introduction
Maps
About Liquefaction
Past Earthquakes
Past Liquefaction
Laws and Guidelines
What Can I Do?
Downloads
Links
References
About This Section

A cooperative project with the California Geological Survey

Susceptibility Map of the San Francisco Bay Area

(**Note**: The following map below requires the Shockwave player to view. You can download the Shockwave player here.)



Very High
High
Moderate
Low
Very Low

How to use the online map:

Use the + and – buttons to zoom in and out

Slide the triangle to zoom in and out

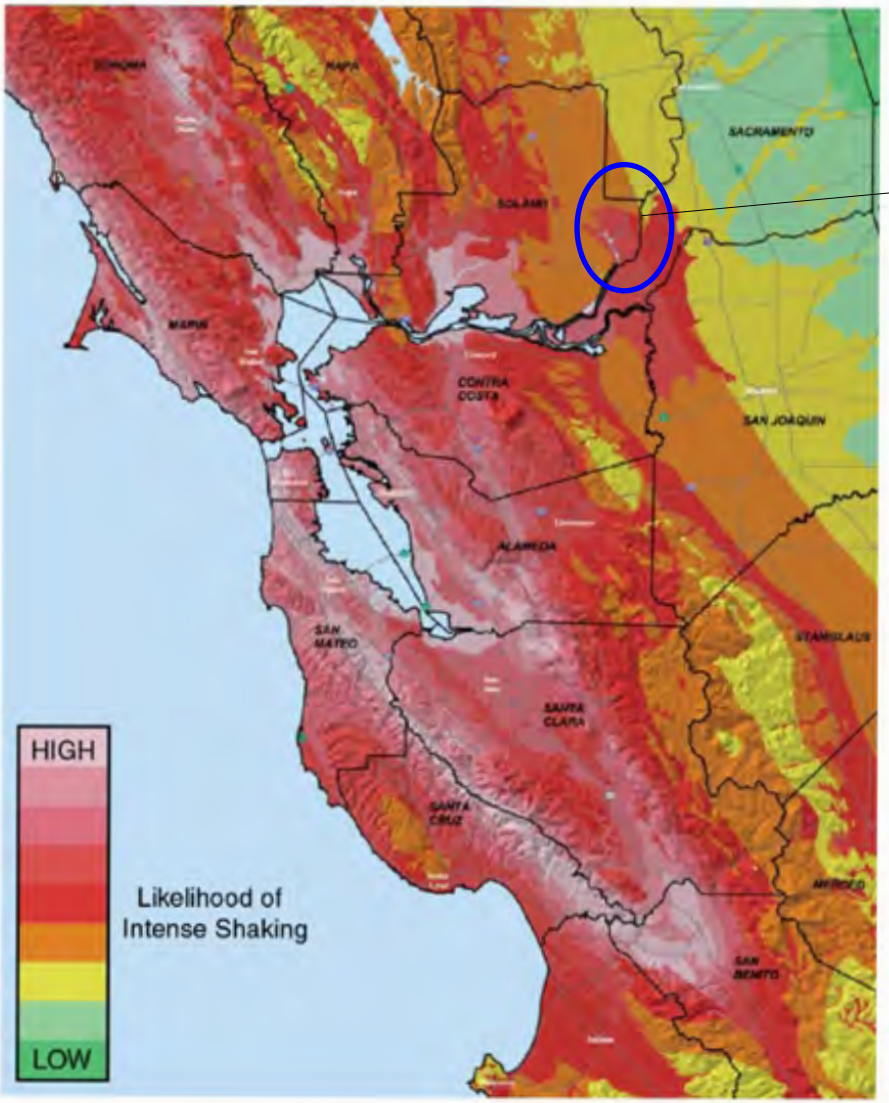
Click and drag on the map to slide the map

Click and drag the red rectangle in the inset map to

Roughly one quarter of the San Francisco Bay region may be exposed to liquefaction with the shaking that has been forecast. The area mapped in the Very High, High and Moderate categories makes up about 25% of the 9-county region. Some of the most hazardous areas are beneath our urban core!

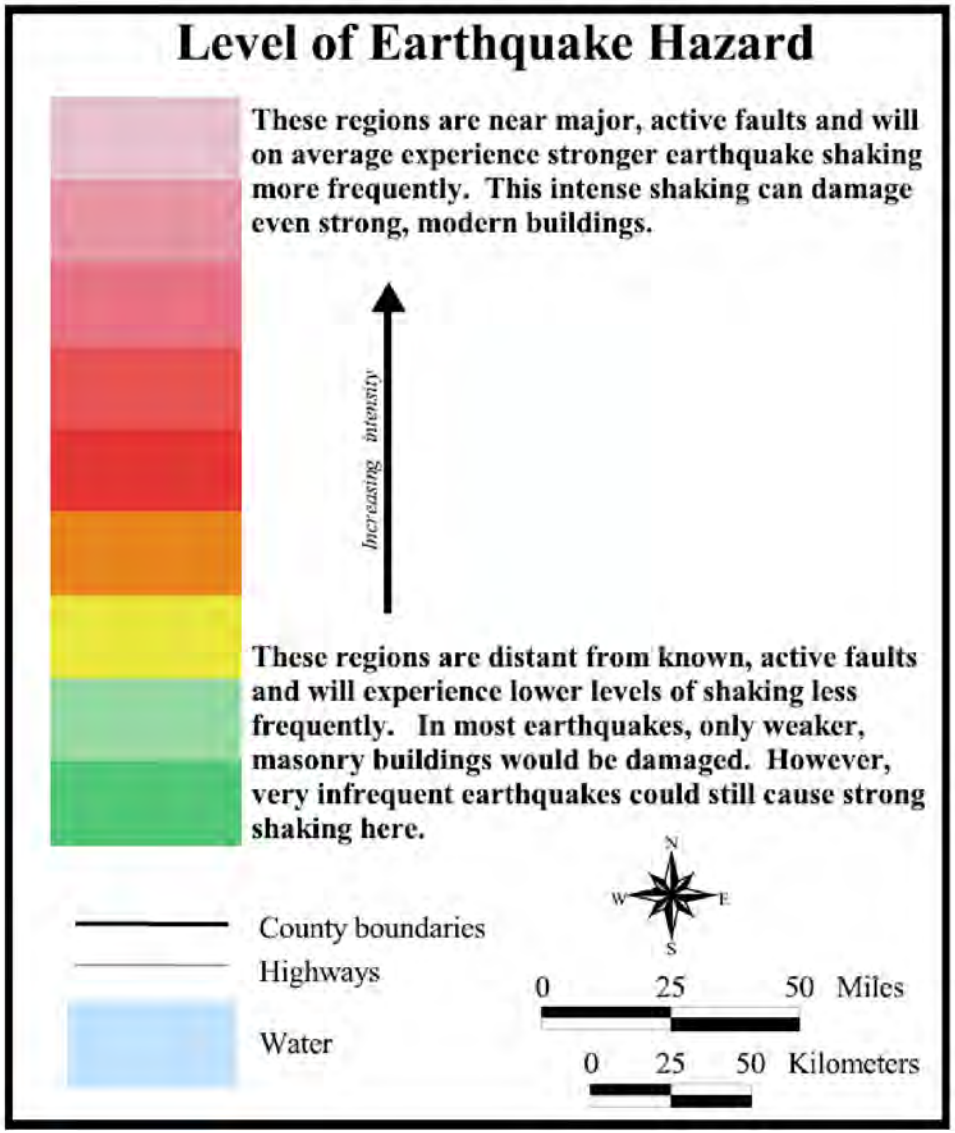
The liquefaction susceptibility mapping is based on assessments of the potential for liquefaction in

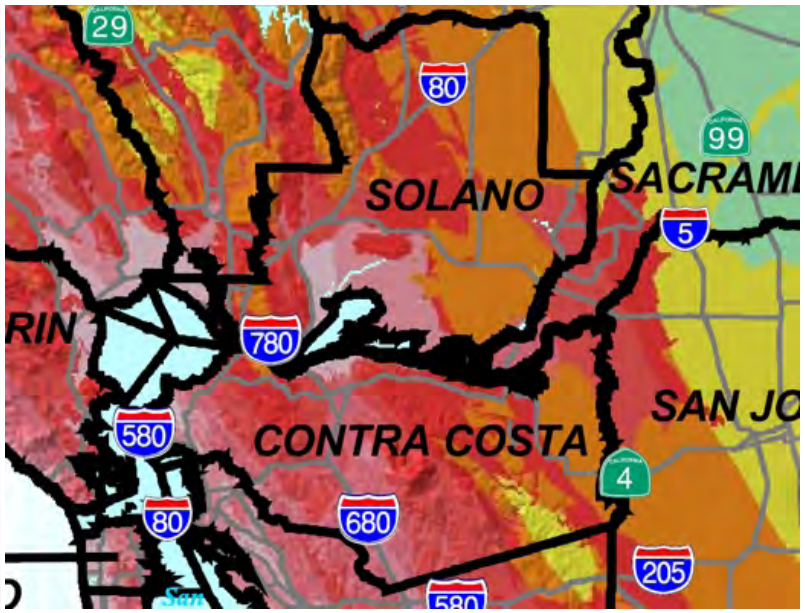
Map of expected levels of shaking from future earthquakes based on anticipated earthquakes and general geology. Bands of highest expected shaking generally follow the active faults; shaking levels are also influenced by the type of materials underlying an area - soft sediment, like that around the Bay margin, tends to amplify and prolong shaking. Note that much of the Bay region has the potential to be shaken very strongly during future earthquakes. Figure modified from U.S. Geological Survey, General Information Product 15, 2005 and, in turn, from http://www.consrv.ca.gov/cgs/rghm/psha/index.htm.

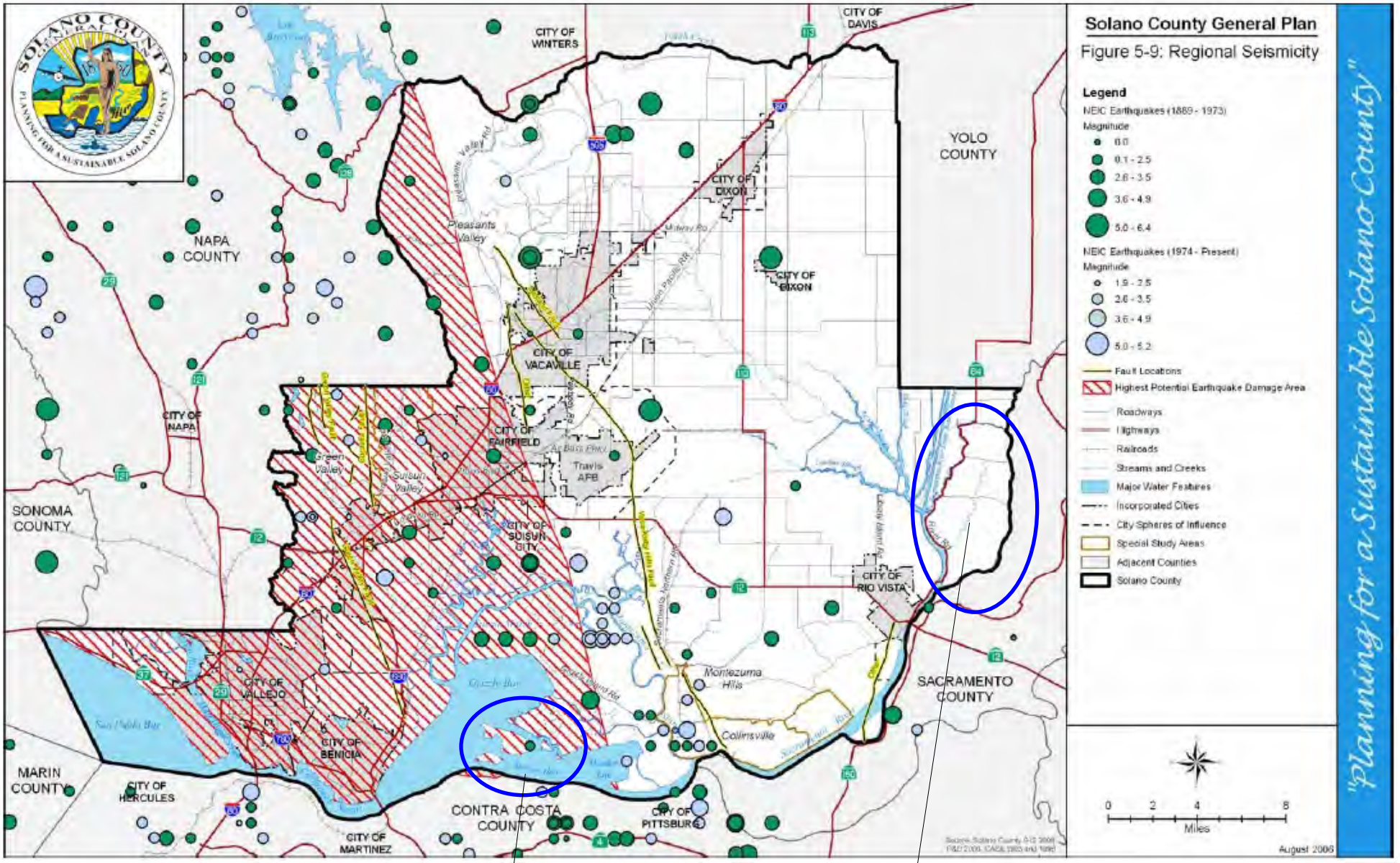


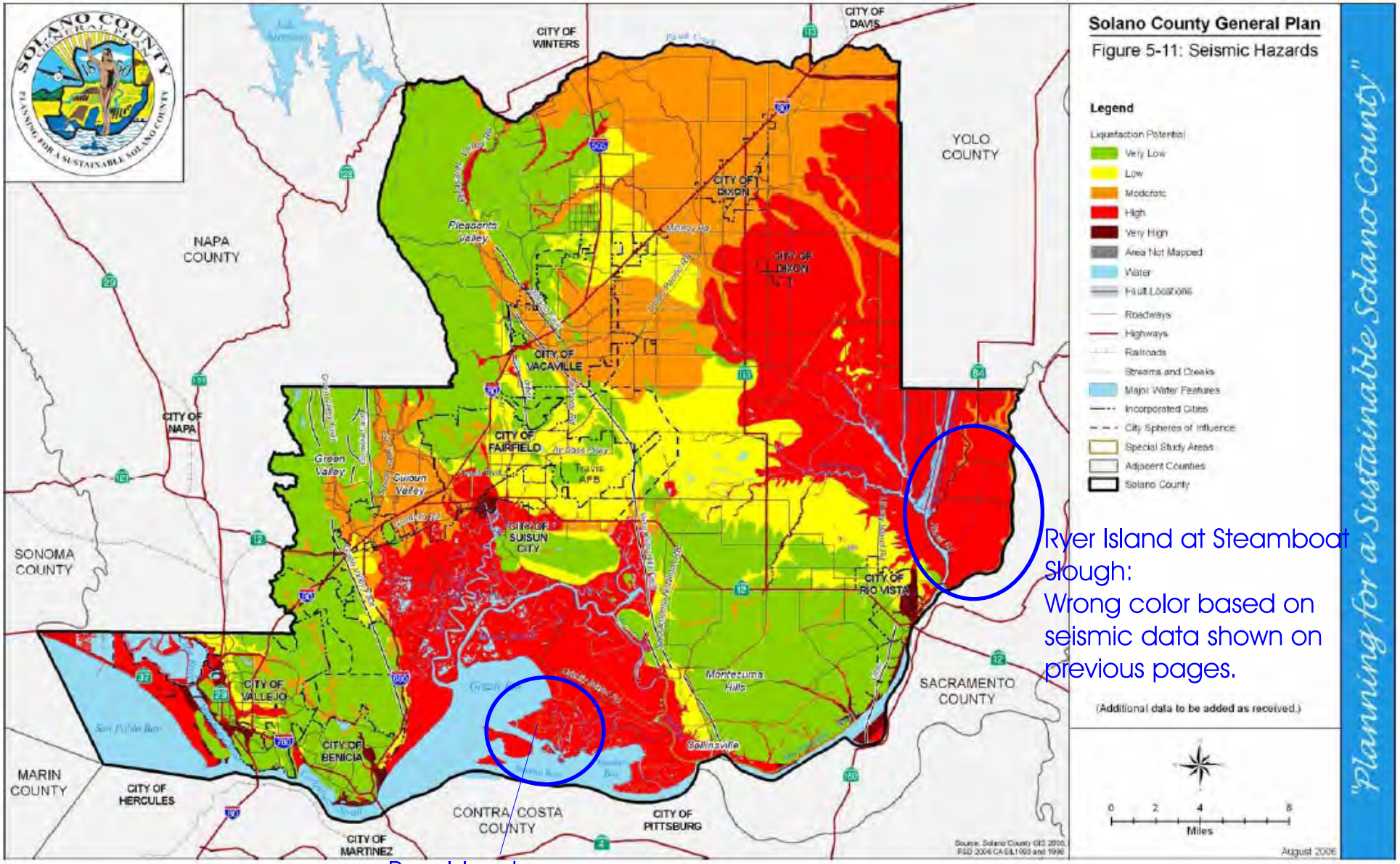
Example of one map currently being used to evaluate levee maintenance and repairs: Ryer Island on Steamboat Slough is categorized wrong based on USGS data previously shown.

Information used by Delta Vision and the various agencies assessing the future of the Delta islands: Ryer Island should be yellow color instead of red based on USGS data shown on previous pages.





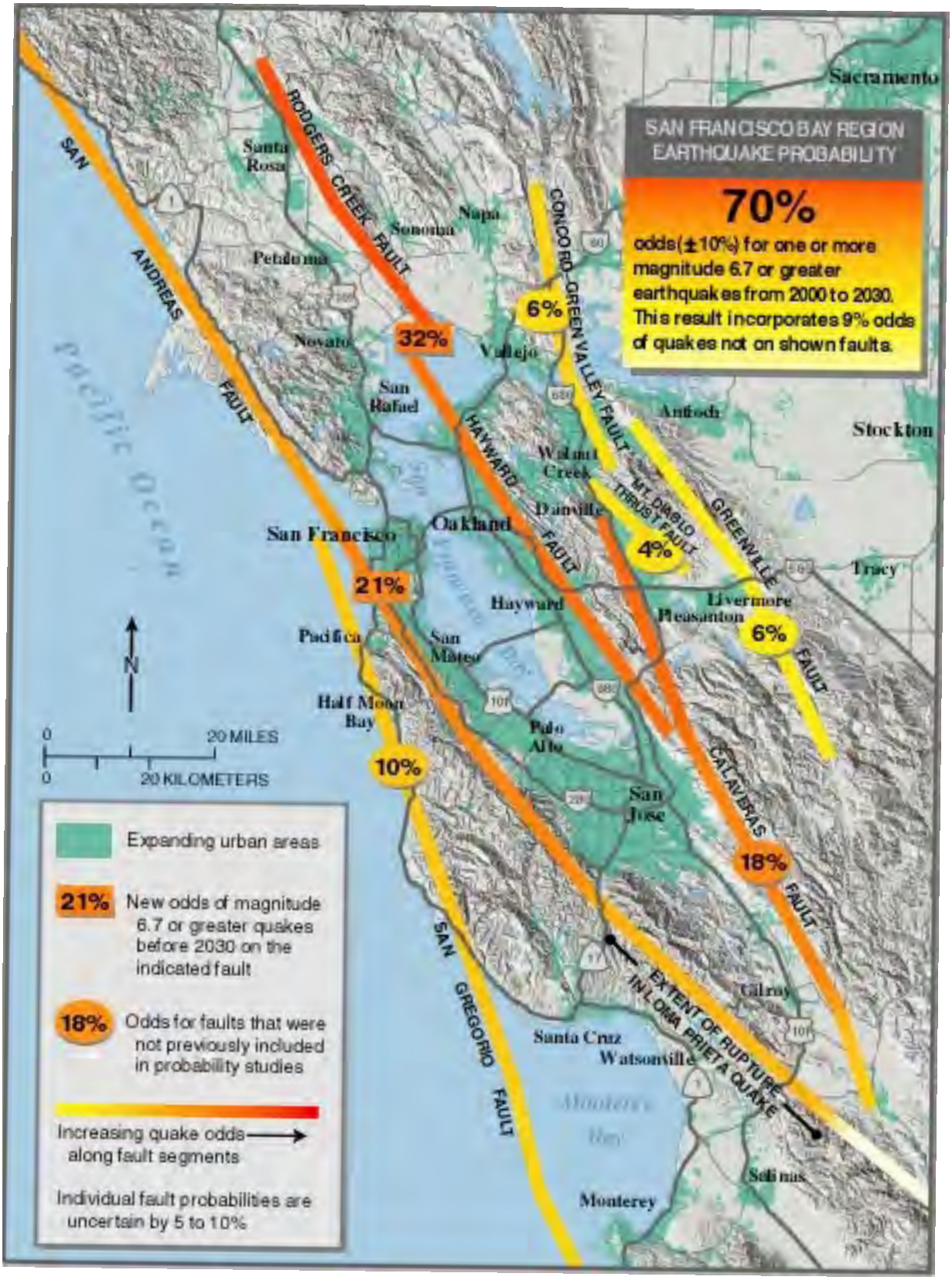

Solano County General Plan
Figure 5-9: Regional Seismicity
Legend
NEIC Earthquakes (1889 - 1973)
Magnitude
0.0
0.1 - 2.5
2.6 - 3.5
3.6 - 4.9
5.0 - 6.4
NEIC Earthquakes (1974 - Present)
Magnitude
1.9 - 2.5
2.6 - 3.5
3.6 - 4.9
5.0 - 5.2
Fault Locations
Highest Potential Earthquake Damage Area
Roadways
Highways
Railroads
Streams and Creeks
Major Water Features
Incorporated Cities
City Spheres of Influence
Special Study Areas
Adjacent Counties
Solano County
0 2 4 8
Miles
August 2008
"Planning for a Sustainable Solano County"
CITY OF WINTERS
CITY OF DAVIS
YOLO COUNTY
CITY OF DIXON
NAPA COUNTY
CITY OF VACAVILLE
CITY OF NAPA
CITY OF FAIRFIELD
Travis AFB
SONOMA COUNTY
CITY OF SUISUN CITY
CITY OF RIO VISTA
SACRAMENTO COUNTY
Montezuma Hills
CITY OF VALLEJO
CITY OF BENICIA
MARIN COUNTY
CITY OF HERCULES
CONTRA COSTA COUNTY
CITY OF PITTSBURG
CITY OF MARTINEZ
Ryer Island
Ryer Island



Ryer Island at Steamboat Slough:
Wrong color based on seismic data shown on previous pages.

Ryer Island
Correct color based on seismic data

This map show a fault not far from Ryer Island in The Suisun/Grizzly area but no fault near Ryer Island on Steamboat Slough



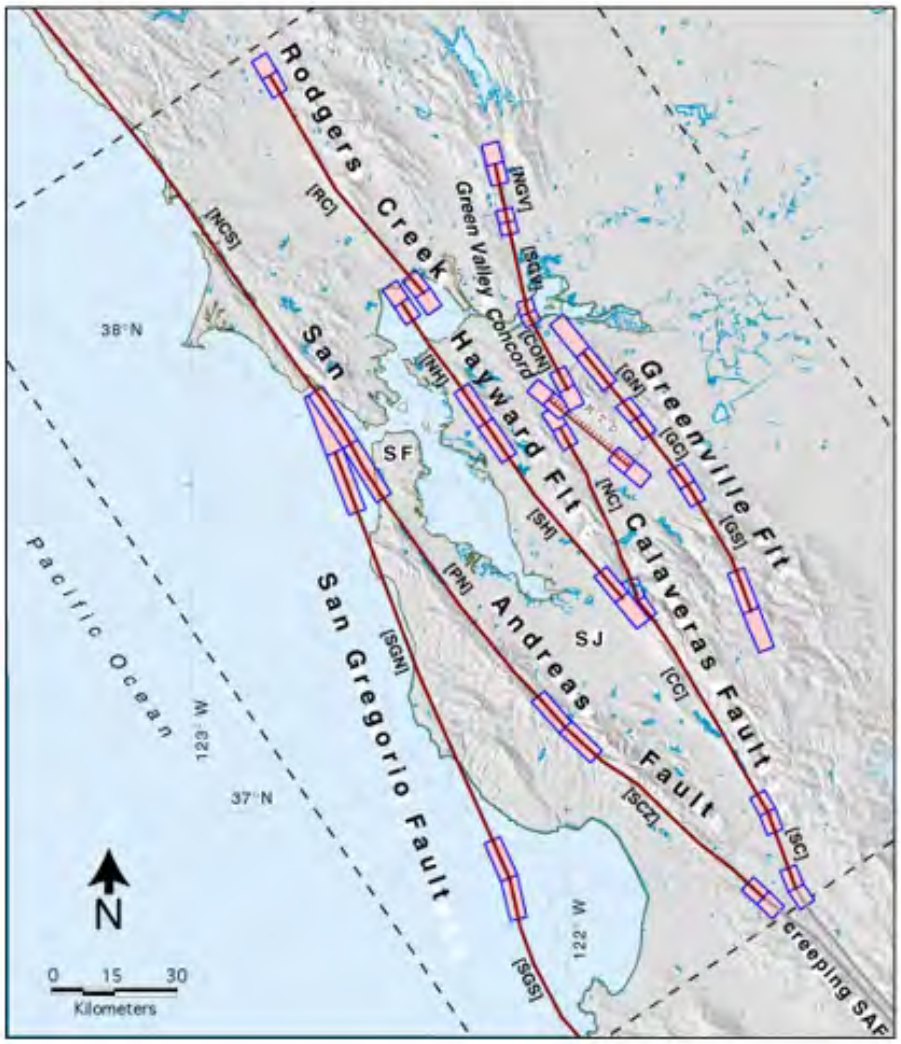


Figure 2. B, Enlarged view of Working Group 1999 box.

Based on maps and data collection points, the study included Ryer Island located in the Suisun/Grizzly area but NOT the Steamboat Slough Ryer Island.

Area considered for USGS seismic study

Table B.1 - Summary of Annual Failure Probabilities for Delta Islands

Zone	NAME	Flood	Seismic	Flood + Seismic	Flood PL 84-99	PL 84-99 Flood + Seismic	PL 84-99 + 1' Raise Flood	PL 84-99 +1' Raise Flood + Seismic
Central	Bacon Island	0.04	0.02	0.06	0.04	0.06	0.03	0.05
Central	Bouldin Island	0.06	0.03	0.09	0.05	0.08	0.05	0.08
Central	Empire Tract	0.04	0.02	0.06	0.04	0.06	0.03	0.05
Central	Mandeville Is.	0.04	0.03	0.07	0.04	0.06	0.03	0.06
Central	McDonald	0.02	0.03	0.05	0.02	0.05	0.02	0.05
Central	Medford Is.	0.03	0.02	0.05	0.03	0.05	0.02	0.04
Central	Quimby Island	0.04	0.03	0.07	0.04	0.06	0.03	0.06
Central	Rindge Tract	0.01	0.02	0.03	0.01	0.03	0.01	0.03
Central	Venice Island	0.07	0.04	0.11	0.06	0.10	0.06	0.09
Eastern	King Island	0.01	0.01	0.02	0.01	0.02	0.01	0.02
Eastern	Terminous	0.04	0.01	0.05	0.04	0.05	0.03	0.04
Eastern	Wright-Elmwood	0.01	0.01	0.02	0.01	0.02	0.01	0.02
Northern	Brack Tract	0.04	0.01	0.05	0.04	0.05	0.03	0.04
Northern	Canal Ranch	0.04	0.02	0.06	0.04	0.06	0.03	0.05
Northern	Dead Horse	0.03	0.01	0.04	0.03	0.04	0.02	0.03
Northern	Grand Island	0.02	0.05	0.07	0.02	0.07	0.02	0.07
Northern	Bethel Island	0.04	0.04	0.08	0.04	0.07	0.03	0.07
* Northern	Ryer Island	0.02	* 0.03	0.05	0.02	0.05	0.02	0.05
Northern	Staten Island	0.04	0.03	0.07	0.04	0.06	0.03	0.06
Northern	Tyler Island	0.04	0.05	0.09	0.04	0.08	0.03	0.08
Southern	Coney Island	0.02	0.02	0.04	0.02	0.04	0.02	0.04
Southern	Jones Tract	0.05	0.03	0.08	0.05	0.07	0.04	0.07
Southern	Orwood Tract	0.03	0.01	0.04	0.03	0.04	0.02	0.04
Southern	Palm Tract	0.05	0.03	0.08	0.05	0.07	0.04	0.07
Southern	Roberts Island	0.03	0.03	0.06	0.03	0.06	0.02	0.05
Southern	Union Island	0.01	0.03	0.04	0.01	0.04	0.01	0.04
Southern	Victoria Island	0.03	0.03	0.06	0.03	0.06	0.02	0.05
Southern	Woodward	0.01	0.03	0.04	0.01	0.04	0.01	0.04
Western	Bradford Is.	0.04	0.05	0.09	0.04	0.08	0.03	0.08
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Western	Holland Tract	0.05	0.03	0.08	0.05	0.07	0.04	0.07
Western	Hotchkiss	0.01	0.03	0.04	0.01	0.04	0.01	0.04
Western	Jersey Island	0.05	0.05	0.10	0.05	0.09	0.04	0.09
Western	Sherman Is.	0.02	0.05	0.07	0.02	0.07	0.02	0.07
Western	Twitchell Is.	0.03	0.05	0.08	0.03	0.08	0.02	0.07
Western	Webb Tract	0.05	0.05	0.10	0.05	0.09	0.04	0.09

Which Ryer Island data was used for this rating?

Source: Author calculations, using data from Draft DRMS Phase 1 Risk Analysis (J.R. Benjamin and Associates, 2007).

Notes: "PL 84-99" denotes scenarios in which levees are upgraded to meet the higher federal levee