

SOLANO COUNTY FLOOD CONTROL

2002-2003 Grand Jury Report

I. Reason for Investigation

The Grand Jury elected to continue the investigation into County flood control policies and procedures initiated by the 2001-2002 Grand Jury. Many issues are unresolved and residents of some areas remain at risk.

II. Procedures

The Grand Jury:

- Reviewed 2001-2002 Grand Jury Report and Responses for County Flooding
- Analyzed Solano County Watershed Management Study - 1997 and 1998
- Attended Solano County Water Agency Board of Directors meetings
- Attended Flood Control Advisory Committee meetings
- Conducted a neighborhood meeting of flood area residents
- Toured County areas subject to frequent flooding
- Compared flood control procedures of six neighboring counties

Interviewed staff members of:

- Solano County Water Agency
- Solano County Department of Environmental Management
- SCWA Board of Directors
- SCWA Flood Control Advisory Committee
- SCWA Strategic Planning Committee
- Solano County Resource Conservation District
- Suisun Resource Conservation District Conservationist
- Natural Resources Conservation Service
- U. S. Fish and Wildlife Service
- California Department of Fish and Game
- U.S. Corps of Engineers
- Solano County Department of Transportation
- California State Assembly
- Consultant Ecologist
- Public Utilities Counsel

III. Background

1. Flood control and water distribution systems within Solano County were actively developed beginning in the 1950s. The Solano Project (Berryessa Dam), establishment of Solano Irrigation District, construction of the Putah South Canal and local distribution canals and excavation of drainage channels were major projects that contributed much to the County economy and welfare. Among several legislative actions that contributed to these projects were the Solano County Flood Control and Water Conservation Act of 1951. Under authority of this Act, the Board of Supervisors addressed flood control measures such as removing vegetation, sediment and debris from waterways. Testimony confirms that much of the work was completed by County agencies on an informal basis.

2. According to testimony the amount of waterway maintenance decreased in the 1980s. Records of funds expended in earlier years are apparently unreliable since testimony indicates work was frequently completed informally without documentation, but the work was considered adequate. The exact reasons for the maintenance decrease are unknown but development of environmental restrictions and increasingly unfriendly court decisions regarding liability of public utilities have been offered as reasons. The Solano County Water Agency Act of 1988 established the Solano County Water Agency (SCWA) with a Board of Directors consisting of the five county supervisors, seven mayors and three representatives of the irrigation districts. Testimony from individuals involved in the development of the 1988 legislation stated that the water for cities, including the North Bay Aqueduct, was the primary objective of the participants. Although the legislation thoroughly recognized the importance of flood control procedures to life and property, it only provided optional authority to SCWA to perform flood control procedures. Despite that expressed concern, this legislation established neither responsibility for flood control on SCWA nor any other County agency. SCWA funds expended for flood control averaged \$1,460. annually from 1988 until 1996 but increased dramatically thereafter to an annual average of \$205,387. Testimony concludes that the effect of those expenditures is very minor because only a small portion has been used for waterway maintenance. Most of the funds went toward watershed studies and other indirect benefits.

3. Testimony by numerous officials stated their belief that there is both public and private responsibility to take actions to prevent and control flooding. However, these same officials each stated that neither the County nor any agency therein has any legal requirement to take actions to control floodwaters except as required by existing easements. Legal advice states that doing no maintenance incurs no legal responsibility, whereas doing any waterway maintenance would subject the County to legal liability if a resident alleged that waterway repairs changed the flow and thereby increased flooding in adjacent or downstream areas.

4. A consultant study in 1998 (entitled Flood Control Master Plan) recommended aerial photography of appropriate County areas immediately after a flood producing storm to permit an immediate, accurate and economical assessment. No action to implement that recommendation has been found.

5. Flooding events rank high in economic loss and frequency of occurrence in Solano County. However, procedures for directing emergency assistance and recording data related to flooding events are ineffective. The Office of Emergency Services (OES) maintains 24 hour/7 day capability for receiving emergency reports of flooding but the OES office phone number is not identified in telephone directories as an emergency number. This office contacts appropriate agencies for assistance to the person in need but makes no record of the flooding event. An office within the Department of Environmental Management (DEM) is tasked to record flooding events but only if the event is declared by the State of California to be a disaster. By contrast, Santa Clara County has a common telephone number (listed as Flood Control Hot Line) to which all residents can report flooding situations and thereby permit the County to provide immediate response, as well as catalog the information for long term analysis.

6. SCWA has performed waterway maintenance when required by previous legal agreements, i.e. waterways developed under control of the Bureau of Reclamation with the Ulatis Project specified continuing maintenance that must be assumed by SCWA and the Green Valley Project where easements were obtained as a precondition. Many studies of flooding problems have been completed in the past 20 years by various agencies of or within the County and by the Corps of Engineers. Most of the study recommendations have not been implemented. The most comprehensive study, Solano County Flood Control Master Plan, was completed in 1997 and 1998 by a consultant firm in contract with SCWA. Forty-one flood risk areas were identified according to damage type and frequency factors as high, medium or low priority for funding. That study is being followed with specific studies of various watersheds on which SCWA has spent \$550,000 since 1995. Testimony received by the Grand Jury states that the five watershed studies completed to date are only

engineering studies and, therefore, will need to be completed for environmental, human and resource factors before maintenance actions can commence.

7. The County Department of Transportation has a continuing inspection program to determine potential flooding problems in relation to roadways. The Department accomplishes appropriate waterway maintenance but only within their road right-of-ways. For example, the bridge over Sweeney Creek at Hartley Road, which may have contributed to local flooding in December 2002, has since been cleared of sedimentary deposits and some rip rapping (netting, vegetation, etc. to stabilize the banks) has been applied. The Department also performs waterway maintenance under contract to SCWA.

8. The County Department of Environmental Management has procedures that will reduce or prevent flood damage but these can only be required in specified situations. New buildings must be built on elevated pads to stay above projected floodwaters if the site is designated by the Federal Emergency Management Agency (FEMA) as a flood plain. New owners in undesignated areas may reject or not recognize the threat and the County cannot require appropriate preventative methods. Testimony states that FEMA flood plain maps are historically very inaccurate and require two to seven years to update. Several County areas have flooded two or three times in the past eight years and are not identified by FEMA as being in a flood plain. Two homes in Solano County that received extensive damage in December 2002 are not identified as being in a flood plain. One house had berms for flood protection because of a long history of area flooding. The floodwaters exceeded anything previously known and breached the berms, forcing the parents to swim through the rapidly rising waters in the darkness to save their three young children. The second incident occurred on a site with no identified history of flooding. The new landowners recognized the flood potential when constructing their home and built berms for protection. Their berms were also breached so the house and outbuildings were inundated with three ft. of water. Some County officials are considering the identification of chronic flooding areas that do not meet the FEMA definition of a flood plain as flood prone and developing code requirements thereon to minimize flood potential.

9. Controlling surface water runoff to prevent flooding is another well-known procedure that is not fully utilized in Solano County. The County appropriately requires a developer of subdivisions to build retention basins or use other methods such as vegetative cover, with capability to temporarily hold the excess runoff from roofs and pavements; a successful program that is used in some cities. The problem is that a series of individual landowners could build the same number of homes collectively with no County requirement for retention basins because it is impractical to expect each landowner to build a basin. This single builder construction will remain the expected future building practice for the upper reaches of some watersheds and the County has no program for providing public protection, or requiring private protection, in this situation. The SCWA Flood Control Advisory Committee is recommending a County moratorium on issuing unincorporated area building permits until flood control procedures are implemented for flood prone areas.

10. SCWA accepts applications from landowners for grants to improve waterways. This program, entitled Small Project Grant Program, provides applicants a grant, not normally exceeding \$10,000, toward approved waterway projects. Requirements are that more than one landowner must benefit from the project, landowners must waive liability, there is no adverse downstream effect and the grantee must maintain the improvement. The maintenance condition of the agreement has not been enforced other than that the landowner cannot reapply for a grant on that waterway. A landowner, who previously received a grant for removal of sediment from his segment of Sweeney Creek, was advised not to apply for removal of fresh deposits of sediment from upstream locations even though the deposits were beyond his control. Local residents testified that these deposits contributed to the December 2002 flooding at Timm Road. The maximum amount budgeted annually by SCWA has been \$100,000. This is considered by some interviewees to be too small to have any significant impact on flood conditions.

11. Incorporated areas are not evaluated in this report other than two observations. First, that extensive coordination between city and County agencies is essential for flood prevention. Testimony has expressed concern that this coordination was lacking in the past but discussions following the December 2002 flooding give hope that this situation has now been recognized and will be corrected. Second, inspection of city creeks by the Grand Jury indicate the need for much more aggressive programs to clear both public and private accessible creeks of impediments to water flow.

12. Individual landowner participation in flood prevention is minimal. Though liability laws exist that indicate individuals may be held responsible if their action or inaction creates flooding of nearby properties, testimony states that enforcement cases are rare in central California. Solano County has no ordinance on this subject. By contrast, San Joaquin County has an ordinance code which requires every property owner of a ditch or channel for drainage water to ". . . maintain the same free from obstacles . . ."

13. Testimony reveals that fear of environmental regulations is a strong deterrent for individual landowners and even some governing officials who are considering waterway maintenance. Testimony by environmental officials denied the reality of those fears. Examples follow, Maintenance on a typical field drainage ditch would generally be permitted with only a visual inspection. Fish and Game Department rules require that any accepted request not evaluated within 30 days is automatically approved. The U.S. Fish and Wildlife Service is less responsive with a normal processing time of 135 days but they work simultaneously with the other agencies to minimize the impact. The Corps of Engineers does not regulate sediment removal from non-navigable streams providing the debris is completely removed from the waterway and not deposited on wetlands. However, the maze of agencies and regulations is complex and includes California Environmental Quality Act, California Department of Fish and Game, U. S. Fish and Wildlife Service, Sacramento or San Francisco Division of U. S. Corps of Engineers, San Francisco or Sacramento Regional Water Quality Board, National Marine Fisheries Service, Natural Resources Conservation Service and Bay Conservation and Development Commission. Staff members of resource conservation districts in Solano County are very knowledgeable and will assist landowners in their districts in preparation of necessary request forms to insure no laws are overlooked.

14. SCWA annually receives approximately \$3.4 million from unrestricted property tax revenues plus \$440 thousand restricted for the Ulatis Project, \$5.2 million for the Solano Project, and \$22.5 thousand for the Green Valley Project. Of the unrestricted total, \$3 million is spent on water distribution projects or retained as reserve and \$400,000 (11.66%) is budgeted annually for flood control. \$100,000.00 (maximum) is designated for small project grants to landowners and the remainder for studies, implementation of watershed plans and miscellaneous expenses. The reserve account exceeded \$13.5 million at the end of the 2002 fiscal year.

15. SCWA has recently designated a Strategic Planning Committee that is tasked to study and present options to the Board of Directors. Their initial efforts indicate potential for significant improvements in flood control measures.

16. Testimony indicated that SCWA has not provided effective flood control for three reasons: the staff believes that flood control was not their responsibility except when easements specifically assigned responsibility, the need to increase SCWA staffing by one full time person assigned to flood control and the need for more use of consultants. SCWA has, according to this testimony, expressed more interest in flood control since September 2002.

17. The SCWA Board of Directors meets monthly for water distribution and flood control issues. In the years 2001 and 2002 five meetings were canceled in advance and the average duration of the 19 actual meetings was 50 minutes. Flood control issues were only discussed at three of those meetings for an estimated discussion time of less than two hours in two years. Testimony expressed concern that some Board members represent only direct interests of their voting constituents and will not fairly consider county-wide flooding problems. Testimony from numerous sources confirms that the Board is heavily staff directed, i.e., the Board

approves most staff presentations with little input or question. Since the December 2002 flood event the SCWA Board meetings have been well attended by concerned citizens and news media and flood control has been a major discussion topic.

18. The SCWA Board directed the formation of a Flood Control Task Force following the 1996 floods. The Flood Control Advisory Committee was implemented in 1998 as a result of Task Force recommendations. Testimony received indicated that the Committee is not effective for several reasons. Committee reports are modified by the SCWA staff before presentation to the Board of Directors. The Committee consists of unpaid members who do not have the necessary available time to evaluate five major watersheds. A full time staff member has been recommended by the Committee to implement actions requested by the Committee. Two examples of the Committee limitations were demonstrated at the February 27, 2003 public meeting of the Committee. Discussions revealed that some members were unaware of chronic flooding problems near Timm Road at Sweeney Creek and Mills Lane. Second, when members were told that some Sweeney Creek landowners continually refused to grant easements so SCWA could perform waterway maintenance, the Committee quickly passed a motion to advise the Board of Directors to pursue a claim of eminent domain against the reluctant landowners if they did not sign within 30 days. An appeal from the audience to first talk to the landowners was ignored. No one questioned and no one explained the landowners' refusal. The Grand Jury has addressed several Flood Advisory Committee and SCWA Board members regarding the easement from the SCWA staff was attempting to impose on the landowners and did not find one member (Committee or Board) who had seen it. Of the several Committee and Board members who have been shown the easement and asked if they would sign it, one avoided an answer and all others said they would not sign without changes.

IV. Findings and Recommendations

Each finding is referenced to the background paragraph number

Finding #1 - The Solano County Water Agency Act of 1988 identifies the need for flood control within Solano County but does not assign responsibility to any agency, regardless of threat risk. (2, 3, 6)

Recommendation #1- The Solano County Board of Supervisors and Solano County Water Agency (SCWA) request State legislation to establish direct responsibility on a County agency for flood control at specified levels of risk.

Finding #2- Flood control within Solano County is an optional responsibility of the SCWA that has received little attention. It has recently received increased interest because of near loss of life from the December floods but continued long term interest against the more visible interest of water distribution is unlikely. (2, 3, 4, 6, 14, 15, 16, 17, 18).

Recommendation #2 – The Solano County Board of Supervisors and SCWA request State legislation mandating that flood control responsibility be assigned to the Solano County Department of Environmental Management (DEM).

Finding #3- Solano County residents have no readily identified procedure for reporting flooding situations. (5, 8).

Recommendation #3A - The Solano County Office of Emergency Services (OES) establish a single and clearly identifiable countywide telephone listing for receiving reports of flooding. The listing should be presented on the emergency page of telephone directories.

Recommendations. #3B - The OES institute a public information program at the approach of each rainy season to insure the public is aware of the reporting procedures.

Finding #4 - No agency within the County has procedures for recording a complete history and data base of flooding within the County. (5)

Recommendation #4A -The OES, upon receiving a report of flooding, should record the event for long term analysis.

Recommendation #4B - The County adopt the 1998 Flood Control Master Plan recommendation to obtain aerial photographs of all flooded areas immediately after a flooding event.

Recommendation #4C - The DEM review all reports and photographs of flooding for long term analysis to determine appropriate flood prevention and control measures.

Finding #5 - Solano County has an ordinance that specifies flood prevention requirements (water runoff control) for homes constructed in subdivisions that is not required for homes constructed on individually owned sites. (9)

Recommendation #5 - The County establish or amend an ordinance to require equal flood prevention procedures for individually owned properties as for subdivision developments. (Funding through local assessment districts may be appropriate.)

Finding #6 - Solano County cannot require landowners in flood prone areas to install flood protection (berms or building pads) when building in areas not designated by Federal Emergency Management Agency (FEMA) as a flood plain. (8)

Recommendation #6 - The County establish or amend an ordinance to establish engineering requirements for new homes being built in areas defined by historical analysis as flood prone.

Finding #7 - A Small Project Grant Program recipient cannot receive an additional grant for a similar project whether or not the condition was caused by factors beyond the landowner's control. (10)

Recommendation #7 - Revise the Small Project Grant Program to permit additional grants when the condition was caused by factors beyond the landowner's control.

Finding #8 -The large number of environmental agencies and a widespread lack of understanding of environmental laws and procedures deters individual landowners and some governing officials from employing appropriate waterway maintenance. (13)

Recommendation #8A - Appropriate agencies (SCWA, DEM, Irrigation Districts, and Resource Conservation Districts) coordinate the development of informative bulletins explaining environmental agencies' functions and require distribution to concerned landowners.

Recommendation #8B - The Resource Conservation Districts promote a direct assistance program to help individuals complete required applications to the numerous environmental agencies. The DEM provide the same assistance for individuals not residing in a resource conservation district.

Finding #9 - Waterways on private urban and rural property are often not cleared of debris by the landowners. (3, 12)

Recommendation #9 - The Solano County Board of Supervisors establish an ordinance to require the maintenance by the property owner of waterways for which public agencies have no easement granted access.

Finding #10 - The Flood Control Advisory Committee lacks adequate staff support. (18)

Recommendation #10 - Provide staff assistance for flood control purposes.

V. Comments

The responsibilities of water distribution and flood control both have complex problems which have very little in common. Water distribution is primarily a business proposition of receipts and expenditures that serves most of the County population. Flood control is a process of expenditures using different resources and is only for a small portion of the population. The SCWA directors and staff have produced excellent results in managing the water distribution for both urban and rural requirements. Their motivation for flood control has been severely lacking because there is no legal requirement or financial advantage for the Agency in treating flood issues.

Establishing an organization that has a single responsibility for flood control would reduce the existing overload of the current SCWA staff and, more importantly, would exclusively focus attention on flood control. The two functions of water distribution and flood control are not handled uniformly in neighboring counties but typically the functions are separated or a single agency has a much larger staff. Two neighboring counties separate the two functions. Another county provides common flood control in both urban and rural areas.

The DEM already operates two functions related to flood control, building permitting and county flood plain administration to the Federal Emergency Management Agency. Assigning DEM the responsibility for flood control would provide more efficient development of flood control and flood prevention procedures, corresponding building codes, and analyses of flood prone and flood plain areas. Regardless of organizational changes, DEM involvement in flood control will increase significantly as increased building in unincorporated areas of the watersheds increases surface water discharge.

A reason given for not implementing the above reorganizing recommendation for flood control is that a legislative change would be required and that would be time consuming and difficult to obtain. However, testimony from legislative sources states that the legislation process would be swift and automatic once the County officials reached consensus.

A small population of the County has repeatedly suffered thousands of dollars in flood damages to each household but their concerns have not been addressed. The majority of the County population lives in cities which provide their own flood control through separate funding. City representatives to the SCWA Board, the largest voting block, have generally voiced the opinion that cities generate most of the tax revenue and receive relatively little in flood control benefit. The recent past flooding and the December 16, 2002 flood have brought increased recognition of the concept that water flows across city boundaries and flood control is a common problem. The concern of the Grand Jury, based on well documented previous history, is that the issues of flooding will again not be addressed after the December 16, 2002 flood recedes in memory.

Geographical and political considerations have contributed to the numerical size of the SCWA Board of Directors (15 members) and the FCAC (13 members). Large membership structures tend to lose effectiveness because individual involvement and sense of responsibility are diluted. Much testimony to the Grand Jury alluded to these existing problems. The written record of the Board of Directors' meetings fully substantiates that testimony. (See background paragraph 17, this report). Assigning flood control responsibility to the DEM will resolve this problem and allow the SCWA Board of Directors to concentrate on their primary area of concern.

A recently resolved legal case may contribute to the decisions of all parties to the County flooding problems. The case is James Arreola et al. v. Monterey County, filed June 25, 2002 by the Sixth Appellate

District Court of Appeal of California. In this case, the defendants (Monterey and Santa Cruz Counties and their water agencies) were found liable to approximately 300 plaintiffs for flooding damage. The claim was that the defendants had failed to maintain a water channel and the defense was that increasing environmental laws prevented previous maintenance procedures.

Affected Agencies

- Solano County Board of Supervisors
 - Solano County Water Agency
 - Solano County Department of Environmental Management
 - Dixon Resource Conservation District
 - Suisun Resource Conservation District
 - Solano Resource Conservation District
 - Solano County Sheriff's Office
 - Solano County Office of Emergency Services
-