



Lou Ann Teixeira
 Executive Officer

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|---|--|
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July 13, 2016

July 13, 2016
 Agenda Item 10

Contra Costa Local Agency Formation Commission
 651 Pine Street, Sixth Floor
 Martinez, CA 94553

Contra Costa County 2015-16 Grand Jury Report No. 1607
“Delta Levees in Contra Costa County: How Well Do We Protect This Vital Safety System?”

Dear Members of the Commission:

On June 6, 2016, Contra Costa LAFCO received Contra Costa County Grand Jury Report No. 1607 “Delta Levees in Contra Costa County: How Well Do We Protect This Vital Safety System?” (Attachment 1). The report raises concerns about the condition of the County’s levee system, what’s at risk, financial challenges, and future opportunities. In preparing this report, the Grand Jury relied on numerous publications, including the 2015 Contra Costa LAFCO Municipal Service Review covering reclamation services.

Contra Costa LAFCO is required to respond to Report No. 1607 no later than **September 9, 2016**. The Government Code requires that the responding entity reply to each finding and recommendation. LAFCO staff has drafted a response (Attachment 2) for the Commission’s consideration.

RECOMMENDATION: It is recommended that the Commission approve the attached response to Grand Jury Report No. 1607, with any changes as desired; and direct LAFCO staff to forward the response prior to September 9, 2016.

Sincerely,

LOU ANN TEXEIRA
 EXECUTIVE OFFICER

c: Distribution

Attachments:

1. Grand Jury Report No. 1607 “Delta Levees in Contra Costa County: How Well Do We Protect This Vital Safety System?”
2. Draft Response to Grand Jury Report No. 1607



June 3, 2016

Lou Ann Texeira
Contra Costa County LAFCO
651 Pine Street, 6th Floor
Martinez, CA 94553

Dear Ms. Texeira:

Attached is a copy of Grand Jury Report No. 1607, "Delta Levees in Contra Costa County" by the 2015-2016 Contra Costa Grand Jury.

In accordance with California Penal Code Section 933.05, this report is being provided to you at least two working days before it is released publicly.

In accordance with Section 933.05(a), the responding person or entity shall report one of the following actions in respect to each finding:

- (1) The respondent agrees with the finding.
- (2) The respondent disagrees with the finding.
- (3) The respondent partially disagrees with the finding.

In the cases of both (2) and (3) above, the respondent shall specify the portion of the finding that is disputed, and shall include an explanation of the reasons thereof.

In addition, Section 933.05(b) requires that the respondent reply to each recommendation by stating one of the following actions:

1. The recommendation has been implemented, with a summary describing the implemented action.
2. The recommendation has not yet been implemented, but will be implemented in the future, with a time frame for implementation.
3. The recommendation requires further analysis. This response should explain the scope and parameters of the analysis or study, and a time frame for the matter to be prepared for discussion. This time frame shall not exceed six months from the date of the publication of the Grand Jury Report.
4. The recommendation will not be implemented because it is not warranted or is not reasonable, with an explanation thereof.

Please be aware that Section 933.05 specifies that no officer, agency, department or governing body of a public agency shall disclose any contents of the report prior to its public release. Please ensure that your response to the above noted Grand Jury report includes the mandated items. Only the Board, as an entity, must legally respond. We will expect your response, using the form described by the quoted Government Code, no later than **September 9, 2016**.

Please send a copy of your response in hard copy to the Grand Jury, as well as a copy by e-mail in Word to epant@contracosta.courts.ca.gov.

Please confirm receipt by responding via e-mail to epant@contracosta.courts.ca.gov.

Sincerely,

Michael Simmons, Foreperson
2015-2016 Contra Costa County Civil Grand Jury

**A REPORT BY
THE 2015-2016 CONTRA COSTA COUNTY GRAND JURY**
725 Court Street
Martinez, California 94553

Report 1607

**DELTA LEVEES IN CONTRA COSTA
COUNTY**

How Well Do We Protect This Vital Safety System?

APPROVED BY THE GRAND JURY:

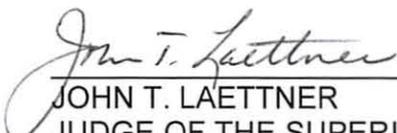
Date: 5/31/16



MICHAEL SIMMONS
GRAND JURY FOREPERSON

ACCEPTED FOR FILING:

Date: 5/31/16



JOHN T. LAETTNER
JUDGE OF THE SUPERIOR COURT

Contra Costa County Grand Jury Report 1607

DELTA LEVEES IN CONTRA COSTA COUNTY

How Well Do We Protect This Vital Safety System?

TO: The Boards of Trustees of All Contra Costa Reclamation Districts; the Contra Costa Board of Supervisors; the Contra Costa Tax Collector; the Contra Costa County Clerk Recorder Elections Division; Contra Costa County LAFCO; and the City Council of Oakley

SUMMARY

Some say about Contra Costa County's Delta levees, "It's not a question of *if* but *when* they will fail." Others disagree. They say that these levees can continue indefinitely to perform successfully *if* they are constantly and proactively monitored and maintained, and receive appropriate improvements as conditions evolve. The answer to this "if or when" debate is of vital interest to the County.

The Delta levees form a critical bulwark against flooding that could have disastrous consequences for the County and even the State. The levees, most of which were built more than a century ago, originally protected privately owned land. This land was reclaimed from marshland for agricultural use, and was sparsely populated by the landowners and possibly a few farmworkers. Today, these levees protect much more:

- the lives and property of 28% of Contra Costa County's population (based on the 2010 census, although the number continues to grow),
- infrastructure that is critical to the County and region (including major roads and highways, a railroad line, oil and gas wells and pipelines, power transmission lines, and aqueducts and canals that supply water to nearly 2/3 of the State), and
- the quality of Delta water that could be exposed to excessive saline levels due to the incursion of seawater.

Many of these levees are fragile, subject to degradation from natural forces and from the effects of human activities. While the Reclamation Districts (Districts) that own and/or manage the levees have done much to protect and maintain them, often aided by State financial support, more can be done, even within the limits of the Districts' financial resources.

This report recommends focusing on three major areas: sharing of resources and knowledge among Reclamation Districts, education of residents of the Districts as to the reasons behind levee rules and regulations, and increased involvement and participation by the various entities that benefit from the protection afforded by the levee system.

METHODOLOGY

In conducting its investigation and preparing this report, the Contra Costa County Grand Jury performed the following:

Interviewed and/or obtained information from representatives of the following public agencies and Reclamation Districts, including professional engineering firms that provide engineering support to the Reclamation Districts:

California Department of Water Resources; Contra Costa County Flood Control; Contra Costa County Department of Public Works/Engineering Services; Contra Costa County Department of Conservation and Development; Contra Costa County Local Agency Formation Commission; Contra Costa Water Department; Contra Costa County Flood Control; Contra Costa County Tax Collector; Contra Costa County Clerk Recorder Elections Division; Ironhouse Sanitary District; Bethel Island Municipal Improvement District, Reclamation Districts 799 (Hotchkiss), 800 (Byron-Discovery Bay), 830 (Jersey Island), 2025 (Holland), 2026 (Webb), 2059 (Bradford), 2065 (Veale), 2122 (Winter), and 2137 (Dutch Slough).

Conducted site visits to the following Reclamation Districts:

Bethel Island Municipal Improvement; District; 799 (Hotchkiss); 800 (Byron-Discovery Bay); 2024 (Orwood and Palm); 2025 (Holland); and 2065 (Veale).

Attended Board Meetings and/or reviewed agendas and minutes from the following public agencies and Reclamation Districts:

Contra Costa LAFCO; Contra Costa Board of Supervisors; Contra Costa Water Agency; Reclamation Districts 799, 800, and 2059.

Reviewed numerous publications of various public agencies, including but not limited to the following:

Department of Water Resources reports and bulletins; Delta Stewardship Council email notices and interim Delta Levee Investment Strategy reports and studies; Delta Risk Management Strategy (DRMS); Delta Overview; United States Geological Survey

reports; Contra Costa County Local Agency Formation Commission (LAFCO) 2015 Municipal Service Review (MSR); Reclamation District 799's 5 year plan; CalFed Bay-Delta Program documentation; Contra Costa County 2014 Delta Water Platform; Bulletin 192-82; U.S. Army Corps of Engineers bulletins; California Water Fix bulletins; Contra Costa Water District newsletter and reports; State Investments in the Delta report; Contra Costa Board of Supervisors 2016 State Legislative Platform/Guiding Policies; Delta Protection Commission 2015 Annual Report; Delta Risk Management 2016 Assessment District Feasibility Study.

CONFLICT OF INTEREST DISCLAIMER

One or more Grand Jurors recused themselves due to a possible conflict of interest and did not participate in the investigation, preparation or approval of this report.

BACKGROUND

The first levees in the County, which are in the western portion of the Delta, were built on reclaimed marshlands from 1868 through the 1870s using manual labor. Those early builders thought --- incorrectly, as it turned out ---- that levees of 3 to 5 feet in height and 12 feet wide at the base would suffice to protect the newly reclaimed lands. Private landowners using manual labor and horse-drawn wagons built these levees out of the surrounding peat soils. Although excellent soil for agricultural purposes, peat proved not the best material for levee construction as it compacts, subsides, and erodes readily. Those levees failed frequently, and the enclosed lands were flooded almost annually.

The advent of the steam-powered clamshell or "grabber" dredges in the late 1800s allowed levees to become higher and broader. Additionally, the use of river-bottom soils with higher clay and mineral content resulted in stronger levees. But even though stronger than the smaller peat levees, the bottom-soil levees were still subject to frequent breaks or "breaches" and/or high water levels washing over the top of the levee ("overtopping"). Those failures resulted in flooding and destruction of the privately owned farms and ranches occupying the land behind the levees. These old agricultural levees still form the base, or footprint, of the majority of levees in Contra Costa County today, raised and/or otherwise strengthened on a piecemeal basis over the past century.

Like the vast majority (over 730 of the approximately 1,115 miles) of Delta levees, all of the levees in the County's portion of the Delta are "non-project" or "local" levees. Other levees known as "project" levees (comprising 385 miles of the Delta levees) form part of an authorized federal flood control project on the Sacramento and San Joaquin River systems. Project levees conform to the highest level of flood protection standards (See

Appendix 1 for a diagram of the various levels of flood protection construction standards), and are inspected by and eligible for rehabilitation by the Army Corps of Engineers. Unlike project levees, our non-project levees were constructed, enlarged, and maintained over the last 130 years by local reclamation districts. These districts are locally funded by parcel tax assessments and governed by locally-elected boards. They have jurisdiction over and responsibility for the levees that protect their District's enclosed lands.

Built at significant expense with modern equipment, materials and engineering techniques, project levees meet the highest standards in flood protection. The improvements necessary to bring the older non-project levees up to these standards are largely beyond the available financial resources of local reclamation districts. Aside from the financial challenges, reclamation districts face a moving target in planning major capital improvements to their levees because levee-construction standards continue to evolve as conditions in the Delta change over time.

Today even the non-project levees are commonly 15 to 20 feet high, 16 feet wide at the top or "crown" and wider at the base, with typically a 2 to 1 slope ratio from crown to base. The levees incorporate modern techniques and materials, as the reclamation districts work to bring the old agricultural levees up to current standards. Nonetheless, many still do not meet the current standards for urban or even non-urban levees. (See Appendix 1.) As land has subsided and sea levels have risen, much of the land protected by these levees is now 10 to 15 feet below sea level, making continual improvement essential to avoid overtopping and consequent flooding.

In addition to overtopping, levees may fail due to breaches. Breaches can occur suddenly or gradually, usually due to physical hazards, which we discuss later in this report. Management of these hazards requires what levee superintendents and consulting engineers have described as "constant vigilance": regular and frequent physical inspections of the levees and immediate attention to trouble spots. Failure to prevent, or at least promptly curtail, breaches could lead to major flooding resulting in loss of lives, property, and infrastructure, and possible impairment of the quality of water drawn from the Delta sources.

As with many other improvement projects, limited financial resources constrain the maintenance efforts of most reclamation districts. In general, the maintenance and improvement work to the levees are financed by assessments levied by reclamation districts. Additionally, the California Department of Water Resources (DWR), recognizing the importance of infrastructure within the Reclamation Districts, provides some supplemental financial support for qualified levee maintenance work through its Subventions Program, grants for qualified improvements through the Special Projects Program, and in situations of pending or potential emergency, Directed Action Grants. These funding mechanisms, and their limitations, are discussed later in this report.

In addition to the districts' financial constraints, old homes, fishing shacks, and other structures have been built on or within the levees' structural framework or sphere in

some of the populated zones. These structures may stand in the way of desired improvements, and even complicate the visual inspections of the levees, thus inhibiting early detection of seepage and/or other early warning signs of the need for preventative work.

The future of the Delta has long been the subject of ongoing discussion and debate, with various state and regional agencies as well as private advocacy groups proposing plans with differing, sometimes conflicting, objectives. Not only do their priorities differ, but also their proposed strategies for achieving their desired objectives. The one certainty is that none of these plans will soon be ready for full implementation. For the immediate future, we must rely on the integrity of the existing levees. Two events of the past decade illustrate quite dramatically the vital importance of these levees, which serve the purpose of protecting property well beyond the land actually enclosed within them:

The August 2009 collision of a bulk carrier ship with Bradford Island. On a calm, clear evening, August 27, 2009, a 570-foot bulk carrier vessel was outbound from the Port of Stockton when it grounded, lost steering, and hit the levee at Bradford Island. The collision damaged approximately 150 feet of levee, causing a serious breach. The journal, the *Professional Mariner* reported as follows:

“The breach jeopardized drinking water quality for 23 million people,” said David Mraz, chief engineer with the Delta-Suisun Marsh Office of the state Department of Water Resources. “Had the levee broken, salt water would have been drawn into the Delta (from San Francisco Bay) and contaminated the region’s fresh water supply with salt.”¹

Contractors worked around the clock over a three-day period with dozens of trucks and bulldozers to make repairs using sand, silt, and clay—all from the island—to buttress and stabilize the levee. That initial repair work cost nearly \$800,000, and then, because these materials compressed and settled over time, required several additional months of close monitoring.

The District’s Project Manager, John Cunningham, said, “DWR advised him that it would have cost the State closer to \$50 million had they not succeeded in closing the breach and preventing a full flood with that quick action.”² The State paid the District’s costs under the Directed Action Program.

¹ The complete news-article can be found at: <http://www.professionalmariner.com/December-Jauary-2009/Bulk-carrier-seriously-damages-levee-in-Sacramento-San-Joaquin-River-Delta/> .

² A fuller description of the incident from the perspective of island residents can be found at: http://californiaspigot.blogspot.com/2010_10_01_archive.html

The June 3, 2004 levee breach on Jones Tract. The Jones Tract is located in the San Joaquin County portion of the Delta, which is adjacent to Contra Costa County. Its 2004 levee breach and subsequent flood demonstrated the far-reaching impact, and importance of the Delta levees to the County and to the entire state. Governor Schwarzenegger declared a State of Emergency on June 4. By June 30, the severity of this flood's effect on key infrastructure and the State's water supply led to a Presidential Declaration of Emergency. This declaration authorized FEMA reimbursement of certain costs of responding to this major disaster.

This "sunny-day breach" of the Upper Jones Tract levee led to what was initially estimated to be approximately 150,000 acre-feet of water flooding the Jones Tract at a time when Contra Costa Water District (CCWD) was pumping from both of their easternmost intake stations in the Delta. According to CCWD's Fall 2004 newsletter, about half that intake was then flowing to Los Vaqueros Reservoir and the rest was going directly to their treatment plants for transmission to customers.

Risks to the water supply were twofold: more salinity due to increased amounts of seawater flowing into the Delta from San Francisco Bay and/or leached from the inundated soil reaching the CCWD intake conduits, and floodwaters contaminated with chemicals and fuel used in the Jones Tract for agricultural purposes. CCWD stopped pumping from their Old River Intake Station and began rapid-response testing and monitoring of water quality. Ultimately the saline content reached levels that necessitated halting flows to the Los Vaqueros Reservoir. As a result, the reservoir entered peak demand summer operations well below the maximum capacity that had been projected. CCWD had to pump water from Los Vaqueros Reservoir, with its lower-than-anticipated volume to fill demand; at the same time, work to pump the floodwaters off the island continued.

Gaining control of the flood was challenging, and repairs were difficult, complicated by key infrastructure within the flood zone. Of particular concern were the Burlington Northern-Santa Fe rail-line and EBMUD's Mokelumne Aqueduct, both of which also run through Contra Costa County. It took four weeks to plug the levee breach, and the full recovery required federal as well as state resources. After removing more than 160,000-acre feet of water, the involved agencies finally succeeded in de-watering the island in December 2004.

DWR estimated the direct cost of containing the flood, levee repair, and island pump-out to be \$30 million. This does not include the cost of lawsuits filed against a number of defendants, including the Reclamation District, DWR and other state agencies, and even the company that provided rodent control services on the island. (The flood washed away all forensic evidence, making it impossible to establish the cause of the flood with certainty. However, most sources consider burrowing rodent activity --- i.e. one of the physical hazards we discuss later in this report --- the most probable cause of the breach and subsequent flood.)

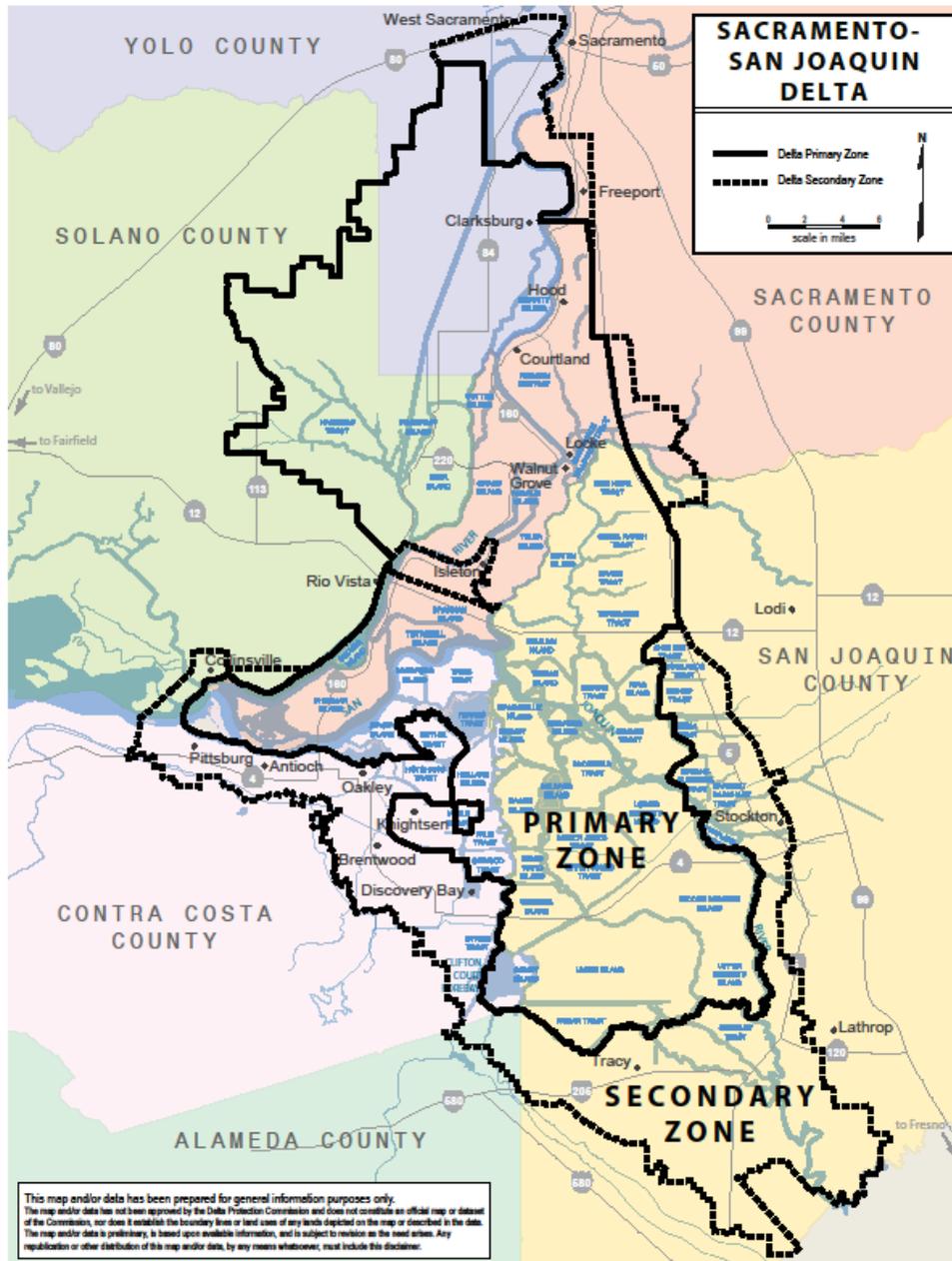


DWR Photos: June 2004 Jones Tract Breach and Flood

In view of all these immediate risks with far-reaching impact, steps should be taken to ensure that our County's Delta levees continue to perform their function successfully.

DISCUSSION

There are 14 special districts (13 reclamation districts and 1 municipal improvement district) in Contra Costa County that have responsibility for levee services within the Delta. They are shown in the following map, along with the Primary and Secondary Zones of the Delta as defined in the California Water Code, Section 12220. Many of the districts are islands; others have responsibility for levees that protect lands only partially surrounded by water.



*Contra Costa County Reclamation Districts
 (Map Courtesy of Delta Protection Commission)*

The western portion of the Delta includes eight islands that the State’s Department of Water Resources (DWR) deems critical to preventing saline (i.e. seawater) intrusion. Six of these eight islands are located in the County. These islands become particularly important during multi-year droughts such as that of the last four years. To prevent saltwater intrusion arising from less fresh (river) water flowing into the Delta, DWR had to install temporary rock barriers, one on False River between Jersey and Bradford Islands, to protect the state’s water quality. The following map shows these islands:



According to the November 15, 2015 Municipal Service Review (MSR) of Reclamation Districts by the County's Local Agency Formation Commission (LAFCO), the 14 Districts are responsible for levees and population as shown in the table on the following page.

| Reclamation District Name and Number | Population | | Total Miles of Levees | Miles at HMP Standard | Miles at PL84-99 Standard | Miles at FEMA Standard |
|---|------------|--|--|-----------------------|---------------------------|------------------------|
| Bethel Island Municipal Improvement (BIMID) | 2,137* | | 14.5 (11.5 Agriculture 3 Urban) | 11.5 | 8** | |
| Hotchkiss (799) | 969 | | 11.7 (8.5 Agriculture 3.2 Urban) | 5.2 | | |
| Byron (800) | 13,352*** | | 18.9 (12.4 Agriculture 6.5 Urban) | | 9.7**** | 18.9 |
| Jersey Island (830) | 3 | | 15.5 | 14.8 | | |
| Orwood/Palm (2024) | 8 | | 14.6 | | 14.6 | |
| Holland (2025) | 27 | | 11 | | 11**** | |
| Webb (2026) | 0 | | 12.9 | 12.9 | 6.25** | |
| Bradford (2059) | 63 | | 7.5 | 7 | | |
| Veale (2065) | 14 | | 5.1 | 4.2 | | |
| Quimby Island (2090) | 1 | | 7 | 7 | | |
| Coney Island (2117) | 4 | | 5.48 | 5.4 | 4.12** | |
| Bixler (2121) | 5 | | 2 | | | |
| Winter Island (2122) | 0 | | 5 | 1.5 | | |
| Dutch Slough (2137) | 2 | | 3.8 | 3 | | |
| Contra Costa County Delta Total | 10,889 | | 139.48 (126.78 Agriculture 12.7 Urban) | 79.2 | 43.97 | 18.9 |

*Population doubles during the summer.

** Levees that meet the higher PL84-99 standard also meet, by default, the HMP standard. Some of the agricultural miles meeting the HMP standard have been improved to meet the higher PL84-99 standard.

*** includes residents inside the old RD boundary, but on elevated peninsulas outside the newer urban levees.

****Levees that meet the PL84-99 Standard may apply for the Army Corp of Engineers Rehabilitation and Inspection Program (RIP). Once accepted, they must pass biannual eligibility ACE inspections to continue to participate.

LAFCO's MSR relies on self-reporting from these districts to evaluate their financial and administrative ability to maintain the integrity of the levees. In assuring that their levees perform adequately, all of these districts face similar challenges, financial and otherwise, in dealing with the risks. As levee conditions are extremely dynamic, conditions reported at one time will not necessarily be accurate a relatively short time later. While the County's levees are performing adequately now, constant and proper management of hazards is essential to maintain that performance.

Physical hazards. Levee breaches typically result from impairment of the levee by any one or a combination of the following:

- uneven settling or subsidence,
- wind and/or wave action on the water side of the levee, with the added risk that unrepaired flooding of one island can increase the intensity of wind and/or wave action on surrounding islands due to the wider expanse of open water,
- erosion of the "crown" (i.e., the top) or dry side of the levee,
- trees that may pull out significant soil from the levee if toppled by storm activity,
- vegetation that may die and leave a conduit for water into or through the levee,
- activities of burrowing rodents, and/or
- human activities, including construction on or through the levee itself or damage to ancillary equipment, such as pumps.

These hazards, other than human activities, can be successfully managed by regular and frequent monitoring and prompt repair when discovered. To accomplish this, those districts that have levee superintendents or district managers who perform the functions of levee superintendent, typically conduct regular, frequent levee patrols. These patrols look for signs of physical hazard, and watch for any unexpected seepage. A certain amount of seepage is normal, and it takes a combination of experience, familiarity with levees, and knowledge of past problem areas to recognize abnormal seepage, and to recognize the early signs of the above hazards.

Challenging as this is, there is no "school for levee maintenance" or any other authoritative training program or textbook to guide levee superintendents. The job of levee superintendent can only be learned by doing, preferably under the initial supervision of or at least consultation with an experienced incumbent. The only other reference source for levee superintendents is the districts' consulting engineer, who is a valuable, but costly, resource. The levees in districts that have little or no population and/or only minimal financial resources are at a greater risk since these districts seldom have the staff to do regular levee patrols. They typically rely on the property owners, who have a stake in the integrity of the levees to protect their property interests, and a consulting engineer, who may serve several reclamation districts. In these instances, the consulting engineer becomes even more important.

Even with the availability of a consulting engineer, levee inspection and maintenance is not easy. In addition to distinguishing normal seepage from problematic seepage, and noting early indications of the latter, the levee superintendent must balance levee

inspection and maintenance with environmental concerns. For example, the tall grass that grows on most levees helps to prevent erosion, but requires mowing to prevent overgrowth obscuring the levee surface and hampering visual inspection of the levee. However, wildlife regulations may prohibit mowing during the spring nesting season for certain birds. The levee maintenance program must address this seasonal prohibition and schedule mowing accordingly.

Further, other wildlife regulations provide that levee maintenance may not cause any “net loss of habitat”. Whenever maintenance requires removal of habitat to facilitate inspection, do preventative work, or make minor repairs, regulations require “mitigation,” i.e., implanting or expanding similar habitat. Some districts, such as Bethel Island, have their own mitigation site, where they plant replacement vegetation. Other districts make use of “mitigation banks” which are independent sites located elsewhere from the district where the district can pay for planting and maintenance of habitat equivalent to that which they cannot directly replace.

In addition to the long learning curve for new levee superintendents, lack of equipment or supplies can hamper timely performance of repair work. Most districts maintain stockpiles of basic supplies such as sand for sandbags, shovels, gravel, and plastic sheeting. Districts place these supplies at strategic locations near particularly vulnerable portions of the levee and at the district equipment yard. Some districts are unable to afford to maintain a full complement of supplies, such as adequate quantities of rock for “riprap” (the rocks that line and buffer the wet side of the levee from wave action) and heavy equipment, such as earthmoving equipment. Where necessary, districts rely on informal mutual-aid agreements.

Human activities that can endanger a levee's integrity pose special challenges. These activities include construction work on the levee, driving or parking heavy vehicles in inappropriate places on the crown of the levee, and vandalism and theft of copper wiring and other materials from pump stations. Such damage occurs primarily in those districts that have a significant number of full-time residents. As those districts have become aware of the potential risk, they have tried to take appropriate precautions, such as burglary preventions at the pump-houses, and the use of inspections and permitting procedures to control construction activities.

Districts such as Bradford Island, which is only accessible by ferry, or Jersey Island, where the population of three is supplemented only by day-visitors who come to the Island to fish, hike, or bird-watch, are able to adeptly control human hazards to the levees. Other districts, such as Bethel Island or Hotchkiss Tract, have a significant number of permanent, fulltime residents, many of whom have homes built in close proximity to the levees. For most of these homes, the levee is essentially part of their “yard”. Nearly all of them have boat docks on the water side of the levee, accessed by crossing the crown of the levee. In the more populated districts, the usual control on human activities that affect the levee is through an “encroachment” permitting process. The permitting process involves the district’s board, in consultation with the levee

superintendent, district manager, and/or consulting engineer, verifying that permitted construction does not potentially impair the structural integrity of the levee.



GJ photos: Pictures of levee crowns

However, many district homeowners are not fully aware of, have forgotten, or may have chosen to disregard the district's permitting procedures. Older structures may pre-date current standards and protocols. The levee superintendent or district manager must watch for violations as part of the regular levee patrol, and explain to violators why the activity in question endangers the integrity of the levee, and therefore the safety of all residents. (See Appendix 2 for a typical permit application with instructions for application and approval.) Websites can offer a means of easy access for residents seeking information and an application form. However, only five Districts have a website. In the others, residents or prospective residents must go to the District office – not always located in the District itself – for forms, instructions, and answers to questions related to construction permit requirements.

Attempting to stop individual violations of permit procedures on a case-by-case basis is something of a “Band-Aid” approach to levee safety. A better approach to encourage compliance with current levee standards and protocols, as well as to encourage homeowners about to undertake major remodeling that they should upgrade to current standards, is to educate the population about the reason for the levee standards and protocols in the first place, the dangers of a flood. In addition to levee protocols and regulations prepared and enforced by each reclamation district, there are numerous resources available that describe the hazards facing all levees and the potential dangers to all residents if these hazards are not properly managed. Greater understanding of the reasons for the rules should bring more willing adherence to levee protocols and construction standards.

One particularly good resource, not specific to the County but providing a good basic explanation of facts about levees and necessary precautions that should be taken to maintain them, is a 2010 brochure prepared by the American Society of Civil Engineers,

“So, You Live Behind a Levee”. It can be found and downloaded from their library at www.ASCE.org. Other brochures are available online or in hard copy from DWR, county and/or city flood control divisions, and at many district offices. One more excellent although generic (i.e. lacking consideration of California’s unique environmental requirements) resource, geared as much to levee owners and/or operators as to residents, is USACE’s “Levee Owner’s Manual for Non-Federal Flood Control Works, available at www.nfrmp.us/docs/USACE.

Additionally, there are a number of levee safety videos produced by DWR, and some by the Army Corp of Engineers that address basic concerns that apply to both project and non-project levees. One such video is “How Levees Fail, How We Fix Them”, available on YouTube or at www.floodassociation.net/resources.

County flood control divisions and planning departments also have available a number of brochures about the National Flood Insurance Program. This program emphasizes the precautions necessary when living in a flood plain. Federal mortgage lenders require that borrowers living near levees that are not FEMA certified and accredited levees (those that meet the highest construction standard for urban levees) obtain flood insurance coverage.

Likewise, educational sessions about emergency flood response programs can serve a dual purpose. Residents who participate in these sessions will have heightened awareness of the potential dangers posed by floods. They are better prepared to react appropriately in such an event. The residents also gain a better understanding of the reasons for levee regulations and protocols, and so are less likely to circumvent the district permitting process.

Lack of staff impedes aggressive outreach such as that done in neighboring Sacramento County, which holds a “Flood Fair” each October, in recognition of “Flood Preparedness Month”. There are also other, less resource-intensive forms of educational outreach such as seasonal mailers or online bulletins. A problem with mailers though, is that without already high public awareness, recipients often discard them unopened. Including them with other timely (pre-storm season) “high-interest” or mandatory mailings from other County departments or agencies, such as property tax bills or voter information, could increase their effectiveness in raising public awareness.

Those districts that publish newsletters or have websites often include flood-safety and emergency response bulletins just ahead of storm season. Their newsletters can also include explanations of the specific need for and intended uses of the benefit assessments that appear in residents’ property tax bills. (See Appendix 3 for just such a sample newsletter.) All these educational or informative efforts have the potential to heighten awareness of the potential flood danger and increase residents’ understanding that the actions of one affect the safety of all – powerful motivation to follow and support levee regulations and protocols.

Financial Challenges and Available Support. Many reclamation districts lack the financial resources to do more than basic maintenance work. The expense of improvements that would bring their levees to a higher standard is often beyond their capacity. Although expensive, these improvements are necessary to prevent overtopping during major storms, especially storms that occur in concert with unusually high seasonal tides (known as “King tides”). The majority of the funding for the work comes from the property owners themselves. This can be a severe hardship for those districts with relatively small numbers of property owners. These smaller districts often struggle to find funds for even basic needs. (See Appendix 3, a Bradford Island newsletter and informational insert explaining their Prop 218 assessment.)

Several sources of financial support are now available from the State, through DWR, to supplement the assessment-based revenue of the districts: the Subventions Program, special projects grants, and Directed Actions.

- Subventions program – This is a cost-sharing program, with the State currently reimbursing 75% of the cost of qualified levee maintenance work after the first \$1,000 per mile. However, the reimbursement is limited to levee maintenance, not to support of ancillary equipment, no matter how essential that equipment might be. For example, clearing ditches of vegetation is eligible, but not pump repair.

It is also important to note that the reimbursement cycle is nearly two years. For example, a proposal submitted by July 1, 2015, for the 2015-16 fiscal year, will receive formal acceptance by November 1, 2015. Before receiving reimbursement from the State, the district submits final invoices after the close of the fiscal year on June 30, 2016. Next, DWR and the Department of Fish and Wildlife (DFW”) physically inspect the work to confirm that it was done according to the application and also to confirm that there was no net loss of habitat. After any challenges, appeals, and/or discussion, DWR authorizes payment of the final invoices, to the extent that it accepts the work. Actual disbursement of funds to the District may not occur until well into the spring of 2017.

This two-year reimbursement cycle presents challenges to small districts, as does the responsibility for paying 25% of the costs (plus first \$1,000 per mile). The Districts have little if any funding other than assessments to pay the costs of the first two-year cycle. Once through that first two-year cycle, they can usually manage the reimbursement cycle on a rolling year-to-year basis. However, the 25% of the cost remains a financial challenge every year. Further, California Prop 1E, which funds this program and supports most of the basic maintenance work, is due to sunset this year. Many districts’ plans hinge on the outcome of a current proposal to remove that sunset.

- Special Projects funding – DWR sends out a request for proposals for levee improvement projects when they know how much is available in a given year,

i.e., \$60 million this past fiscal year, with a limit of \$15 million per district per project. The districts' proposals, first a short form and then a complete application with engineering specifications and drawings, go through two sequential grading and ranking processes. Staff engineers and biologists evaluate the proposals, assigning points based on priorities set forth in the Delta Reform Act.

Special projects require less cost share by the district, i.e. typically 10% retained and 90% reimbursed, and may allow some advance partial funding, depending on the scope of the project. The documentation requirements are greater than for the Subventions Program. For the most part, districts submit monthly status reports and invoices, and obtain DWR approval before paying the contractor for completed work.

- Directed Actions – This program is a “special circumstances” program. In the face of a pending or potential emergency with implications for the state water supply, the DWR Director can authorize funding for emergency action. Examples include the repairs to the Bradford Island levee damaged by the ship collision in 2009, and an agreement with Jersey Island to make emergency improvements in preparation for the December 2005/January 2006 “Pineapple Express” storm front. Had that winter storm overtopped the levees of Jersey Island, it is highly likely that additional islands would have also flooded and thus endangered the water supply for the State.

The table below shows the amounts received by each district through the Subventions and Special Projects Programs, in dollars and as a percent of total district revenues. Revenue other than that from these state programs is comprised of the assessments received from district property owners. The difference in non-State-funded revenue between the more populous districts (i.e. Bethel Island, Hotchkiss, and Byron) and the less populous districts reflects the financial advantage of a larger assessment base. However, the financial needs of the smaller districts for levee maintenance and improvement are not proportionately less. In fact, the smaller districts are just as likely to contain, and be responsible for protecting, key infrastructure and/or to provide a barrier to seawater intrusion

(Information provided by LAFCO MSR 2015)

| Reclamation District Name and Number | Total Revenues | Subventions Program (SP) | Special Projects Program (SPP) | Percent of Total from State |
|---|----------------|--------------------------|--------------------------------|-----------------------------|
| Bethel Island Municipal Improvement (BIMID) | | | | |
| 2012-2013 | \$553,746 | \$130,653 | \$6,762 | 24.8% |
| 2013-2014 | \$543,271 | \$66,934 | \$30,440 | 17.9% |
| Hotchkiss (799) | | | | |
| 2012-2013 | \$513,910 | \$87,825 | 0 | 17.0% |
| 2013-2014 | \$681,759 | \$76,003 | \$165,340 | 35.4% |

| | | | | |
|----------------------|--------------|-----------------|--------------|-------|
| Byron (800) | | | | |
| 2012-2013 | \$1,487,371 | \$128,341 | 0 | .09% |
| 2013-2014 | \$1,451,294 | \$31,295 | 0 | .02% |
| Jersey Island (830) | | | | |
| 2012-2013 | \$4,235,078 | \$232,273 | \$3,437,133 | 86.6% |
| 2013-2014 | \$3,738,175 | \$881,860 | \$2,300,000 | 85.1% |
| Orwood/Palm (2024) | | | | |
| 2012-2013 | \$3,366,749 | 0 | \$3,050,412 | 91.6% |
| 2013-2014 | \$524,506 | \$67,880 | \$140,939 | 39.8% |
| Webb (2026) | | | | |
| 2012-2013 | \$615,689 | \$201,683 | 0 | 32.8% |
| 2013-2014 | \$2,456,735 | Included in SPP | \$2,256,677 | 91.9% |
| Bradford (2059) | | | | |
| 2012-2013 | \$2,229,692 | \$6,358 | \$1,916,597 | 86.2% |
| 2013-2014 | \$523,123 | \$192,672 | 0 | 36.8% |
| Veale (2065) | | | | |
| 2012-2013 | \$63,762 | 0 | 0 | 0 |
| 2013-2014 | \$531,720 | \$33,620 | \$399,600 | 81.5% |
| Quimby Island (2090) | | | | |
| 2012-2013 | \$151,716 | \$76,716 | 0 | 50.6% |
| 2013-2014 | \$106,407 | \$103,872 | 0 | 97.6% |
| Coney Island (2117) | | | | |
| 2012-2013 | Not Reported | Not Reported | Not Reported | 0 |
| 2013-2014 | | | | |
| Bixler (2121) | | | | |
| 2012-2013 | \$5,000 | 0 | 0 | 0 |
| 2013-2014 | \$5,000 | 0 | 0 | 0 |
| Winter Island (2122) | | | | |
| 2012-2013 | Not Reported | Not Reported | Not Reported | 0 |
| 2013-2014 | Not Reported | Not Reported | Not Reported | 0 |
| Dutch Slough (2137) | | | | |
| 2012-2013 | \$750,395 | \$560,315 | 0 | 74.7% |
| 2013-2014 | \$1,111,946 | \$910,316 | 0 | 81.9% |

Increasing urbanization where development is allowed (i.e. in the Delta Secondary Zone) offers potential for financial benefit beyond the increased revenue generated by a parcel assessment on new district residents. As developers seek approval to build new communities, the appropriate planning agencies can consider including financial support of existing levees in the requirements for approval. For example, the East Cypress Corridor Plan approved by the City of Oakley for development of annexed land located in the interior of Hotchkiss Tract (Reclamation District 799) included \$11 million for reconstruction, improvement, and pump replacement for existing levees. This funding was in addition to the cost borne by the developer in building a new FEMA certified and accredited interior “ring” levee surrounding the Summer Lake Development.

It is important to note that FEMA certification and accreditation do not require physical inspection of the levee. Certification is based on FEMA’s review of documentation that the levee meets design construction standards for at least the one-percent-annual chance (or “100-year”) flood. Accreditation requires confirmation of the adequacy of the

operation and maintenance plan provided by the levee owner. As FEMA's own literature states: "Levee certification does not warrant or guarantee performance, and it is the responsibility of the levee owner to ensure the levee is being maintained and operated properly." FEMA further states: "FEMA accreditation is not a health and safety standard – it only affects insurance and building requirements."

Future Opportunities. As noted above in the "Background" section, many other entities besides residents of the districts benefit from the protection of the levees. State and local agencies are now discussing how a broader population of such beneficiaries might equitably share in the cost of maintaining and/or improving these levees.

In March 2016, the Delta Protection Commission began a workshop that includes a series of meetings tasked with developing a fair system of "beneficiary-pays" funding for needed levee maintenance and improvements. This is in conjunction with the Delta Stewardship Council's Delta Levee Investment Strategy, also still in progress, that is trying to assess the value of all assets – including key infrastructure --- within each reclamation district, protected by each district's levees. The "beneficiary-pays" workshop expects to conclude by June 2016. It then will make recommendations to the Delta Stewardship Council. The Council will give the recommendations consideration in pursuing future legislation, but there is no certainty the recommendations will be implemented.

In the meantime, Contra Costa Water District has spearheaded an interagency cooperative venture to accomplish much-needed improvements to the levees in Bacon Island (Reclamation District 2028), which is adjacent to the County, lying within San Joaquin County. Reclamation District 2028 submitted the application to DWR for Special Project funding to improve 4.7 miles of levee along Old River and to create areas of native grassland and scrub shrub habitat. Reclamation District 2028 will be the contracting agency with DWR and provide in-kind funding through staff time and land taken out of production for habitat and levee materials. Others that will benefit from the project also will help to finance it through funding or in-kind services.

In February 2015, DWR selected this project for \$10.2 million in grant funding, approximately 97% of the project cost of \$10.57 million. The beneficiaries of the project will participate as follows:

- Reclamation District 2028 will be responsible for the environmental review, permitting, design and implementation.
- Alameda County Water District, Contra Costa Water District (CCWD), Metropolitan Water District, Santa Clara Valley Water District and Zone 7 will provide monetary contributions to the Project.
- East Bay Municipal Utility District and San Francisco Public Utilities Commission will provide in-kind technical support and implementation support.
- CCWD will serve as the fiscal agent for the agencies' financial contributions.
- Pacific Gas & Electric (PG&E) will provide in-kind service through relocation of a high-pressure natural gas line and overhead electrical lines.

Where do we go from here? The answer to the “if or when” question posed at the beginning of this report depends on what we do locally to protect the County’s Delta levees while agencies with the authority to set policy continue to debate issues that will determine the long-term future of the Delta. Meantime, we all have a stake in the integrity of the existing levees. They are today’s line of defense against flooding with catastrophic potential for Contra Costa County and for much of the State as well. We must all pay attention to, and encourage support of the everyday, practical and sensible activities that keep these levees safe, to the benefit of all of us.

FINDINGS

- F1. The portion of the Delta that lies within Contra Costa County includes six of the eight western islands, deemed by the State to be of particular importance to preventing seawater intrusion that would impair the quality of water for nearly two-thirds of the State, including much of the East Bay area.
- F2. Loss (i.e. submersion) of any of the six islands in the Delta within Contra Costa County has potential to affect adversely much more than just Contra Costa County.
- F3. Key infrastructure located within the Contra Costa County reclamation districts benefits the entire County, including major County roads and highways, a rail-line, PG&E power transmission lines, natural gas wells, petroleum pipelines, Contra Costa Water District intakes, pumping stations, and portions of both the Contra Costa Canal and EBMUD’s Mokelumne aqueduct.
- F4. The levees in the County’s portion of the Delta have been built up or otherwise strengthened on a piecemeal basis over the century or more of their existence.
- F5. Because the levees remain vulnerable to natural hazards and human activities, they require constant vigilance – i.e., frequent inspection coupled with timely maintenance and prompt repairs.
- F6. The Army Corp of Engineers inspects federal levees, as well as non-federal levees that qualify for the Rehabilitation and Inspection Program.
- F7. All of our County’s levees are non-federal levees and the only non-federal levees in the County that qualify for participation in the Rehabilitation and Inspection Program are in Holland and Byron Reclamation Districts.
- F8. The only levees in the County that are independently evaluated for structural integrity are those in Reclamation Districts 800 and 2026, Holland and Byron.
- F9. LAFCO’s MSR of the reclamation districts, which it performs every 5-years, focuses on financial and administrative management of the districts.

- F10. LAFCO relies on self-reported information from the districts, without physical inspection, to evaluate how well the districts are maintaining the integrity of the levees for which they are responsible.
- F11. There is no formal or standardized educational or training resource available to the districts for levee inspection, maintenance, and repair, which can support new levee superintendents or managers while they acquire the experience to recognize problems early, learn how to appropriately respond, and learn how to balance environmental regulations with maintenance protocols.
- F12. Levee management requires recognizing seasonal timeframes and juggling multiple deadlines, including preparing for storm season and the “no-mowing” period, when local bird populations nest, as well as timely application for the subvention and/or special projects funding programs.
- F13. Unpermitted encroachments can hinder visual inspection of the levee surface and create new structural weaknesses or potential conduits for seepage.
- F14. Education about the potential danger of unpermitted encroachments can be a highly effective management tool for mitigating this type of hazard because increased understanding of the potential consequences of such encroachments can support longer-term adherence to levee regulations and protocols.
- F15. Since early recognition of potential trouble spots and prompt repair work are critical to maintaining levee integrity, while resources for levee patrols are limited, the presence of an educated and aware residential population can supply additional eyes to provide the constant vigilance that is crucial to safeguarding the levees.
- F16. In addition to permitting procedures and intermittent newsletters, there are other opportunities to educate the public, and especially residents of reclamation districts, about the hazards that can damage or impair the levees.
- F17. Explaining the hazards to levees by multiple means at appropriate times -- i.e., just before the start of storm season in the fall – can help to keep awareness at a heightened and effective level.
- F18. Efforts to educate and raise public awareness could be enhanced by cross-departmental and/or cross-agency cooperation such as including Flood Control safety bulletins with other seasonally appropriate, apt-to-be-read or mandatory mailings such as property tax bills or voter information packets.
- F19. It takes nearly 2 years from the application date for reclamation districts to receive reimbursement for levee maintenance work approved by DWR under the Subventions Program.

- F20. The cost of the initial funding required of reclamation districts under DWR's Subventions Program can be prohibitive for some reclamation districts, resulting in under-utilization of this highly beneficial program.
- F21. Some reclamation districts that are unable to maintain the staff, equipment, and material stockpiles needed for emergency major repairs, rely on informal mutual-aid arrangements.
- F22. Planning agencies can require that developers who seek to develop areas within reclamation districts financially contribute to existing levees as a condition of approval of their proposed developments, as was done with the East Cypress Corridor Plan for residential development in the interior of Hotchkiss Tract, Reclamation District 799.
- F23. The feasibility of interagency cooperative ventures to accomplish levee improvements has been demonstrated by multi-agency coalition for to improve the levees in Reclamation District 2028, Bacon Island.

RECOMMENDATIONS

- R1. After identifying the necessary funding, LAFCO should consider including independent physical inspections of levee conditions, in addition to the self-reported evaluations of the conditions, in the MSRs of all County reclamation districts, if necessary by hiring an independent engineering firm to perform this function.
- R2. After identifying the necessary funding, the County reclamation districts should collaborate in establishing and supporting a shared website, possibly approaching one of the Districts that already has a website to take the lead. This website should include "Best Practices", a calendar of date- or seasonal-specific tasks, such as preparation for nesting season when certain work is prohibited, and dates when Subventions Program applications are due, and a common log of significant levee incidents to identify and track historical trouble spots.
- R3. After identifying the necessary funding, the County reclamation districts should consider taking turns hosting a short, local, annual conference for all District Board members and staff. Each conference should include an educational presentation on a matter of common interest, such as changes in regulations or levee standards, new technology or procedures for levee work, new sources of funding, and/or most effective techniques for successful grant applications.
- R4. After identifying the necessary funding, reclamation districts should consider adding a "training module" for new and re-elected Board members to their required governance training (i.e. Brown Act and Ethics). This "module" or session should cover the district's levee regulations and protocols, the consequences of noncompliance with regulations and protocols, flood preparedness, and

emergency response training – or at minimum a “back to basics” session with the consulting engineer to cover these concerns.

- R5. Reclamation districts should formalize, or at a minimum document, all “Mutual Aid” agreements for future reference as reclamation district personnel change over time.
- R6. After identifying the necessary funding, the County Tax Collector should consider including informational material on flood preparedness or levee safety precautions, available at no charge from our County Flood Control or Central Valley Flood Control Agency or DWR, with every property tax bill that has an address within a reclamation district.
- R7. After identifying the necessary funding, the County Clerk Recorder should consider including informational material on flood preparedness or levee safety precautions, available at no charge from our County Flood Control or Central Valley Flood Control Agency or DWR, with election materials sent to addresses within a reclamation district.
- R8. After identifying the necessary funding, the Board of Supervisors should consider directing the County Planning Department to provide each applicant for new construction or major remodeling in unincorporated areas within a reclamation district with a brochure or direction to an online website explaining levee safety rules and regulations, along with the reasons for same, applicable to their particular reclamation district and to require that each applicant confirm receipt of the brochure or link to website by initialing.
- R9. The Oakley City Council should direct the Oakley Planning Commission to provide each applicant for new construction or major remodeling within a reclamation district in the City of Oakley with a brochure or direction to an online website explaining levee safety rules and regulations, along with the reasons for same, applicable to their particular reclamation district and to require that each applicant confirm receipt of the brochure or link to website by initialing.
- R10. The Board of Supervisors should consider directing the appropriate planning and/or land use departments to follow the precedent established by the East Cypress Corridor Project and condition approval of proposals for new residential or commercial development, where allowed on any unincorporated County land in a reclamation district, on financial support of the existing levees.
- R11. The City of Oakley should consider following the precedent established by the East Cypress Corridor Project and conditioning approval of proposals for new residential or commercial development, where proposed on Oakley’s annexed land in a reclamation district, on financial support of the existing levees.

R12. After identifying the necessary funding, the Board of Supervisors should consider directing the County’s Transportation, Water, and Infrastructure Committee to establish a task force or initiate a staff study to investigate ways to encourage and facilitate grant-seeking coalitions of urban water agencies and/or other beneficiaries of the levee system, on smaller-scale projects with shorter time horizons than those currently being investigated by the Delta Protection Commission (i.e. similar to but including even smaller-scale projects than the Bacon Island improvement coalition).

R13. After identifying the necessary funding, the Board of Supervisors should consider directing the County’s Transportation, Water, and Infrastructure Committee to establish a task force to investigate possible ways for the less-advantaged reclamation districts to obtain interim funding, including but not limited to grants or low-interest rate loans, to cover the initial two-year lag-time to obtain reimbursement for essential levee maintenance work from the Subventions Program.

REQUIRED RESPONSES

| | <u>Findings</u> | <u>Recommendations</u> |
|--|-------------------|------------------------|
| Contra Costa County LAFCO | 9, 10 | 1 |
| The Board of Trustees of Bethel Island Municipal Improvement District | 4, 5, 11 – 17, 21 | 2 - 5 |
| The Board of Trustees of Reclamation District 799 (Hotchkiss Tract) | 4, 5, 11 – 17, 21 | 2 - 5 |
| The Board of Trustees of Reclamation District 800 (Byron Tract) | 4, 5, 11 – 17, 21 | 2 - 5 |
| The Board of Trustees of Reclamation District 830 (Jersey Island) | 4, 5, 11 – 17, 21 | 2 - 5 |
| The Board of Trustees of Reclamation District 2024 (Orwood/Palm Tract) | 4, 5, 11 – 17, 21 | 2 - 5 |
| The Board of Trustees of Reclamation District 2025 (Holland Tract) | 4, 5, 11 – 17, 21 | 2 - 5 |
| The Board of Trustees of Reclamation District 2026 (Webb Tract) | 4, 5, 11 – 17, 21 | 2 - 5 |

| | | |
|--|-----------------------|---------------|
| The Board of Trustees of Reclamation District 2059 (Bradford Island) | 4, 5, 11 – 17, 21 | 2 - 5 |
| The Board of Trustees of Reclamation District 2065 (Veale Tract) | 4, 5, 11 – 17, 21 | 2 - 5 |
| The Board of Trustees of Reclamation District 2090 (Quimby Island) | 4, 5, 11 – 17, 21 | 2 - 5 |
| The Board of Trustees of Reclamation District 2117 (Coney Island) | 4, 5, 11 – 17, 21 | 2 - 5 |
| The Board of Trustees of Reclamation District 2121 (Bixler Tract) | 4, 5, 11 – 17, 21 | 2 - 5 |
| The Board of Trustees of Reclamation District 2122 (Winter Island) | 4, 5, 11 – 17, 21 | 2 - 5 |
| The Board of Trustees of Reclamation District 2137 (Dutch Slough) | 4, 5, 11 – 17, 21 | 2 - 5 |
| The Contra Costa County Tax Collector | 16 - 18 | 6 |
| The Contra Costa County Clerk Recorder Elections Division | 16 - 18 | 7 |
| The Contra Costa County Board of Supervisors | 1 - 3, 19, 20, 22, 23 | 8, 10, 12, 13 |
| The Oakley City Council | 1 – 3, 19, 20, 22 | 9, 11 |

These responses must be provided in the format and by the date set forth in the cover letter that accompanies this report. An electronic copy of these responses in the form of a Word document should be sent by e-mail to epant@contracosta.courts.ca.gov and a hard (paper) copy should be sent to:

Civil Grand Jury – Foreperson

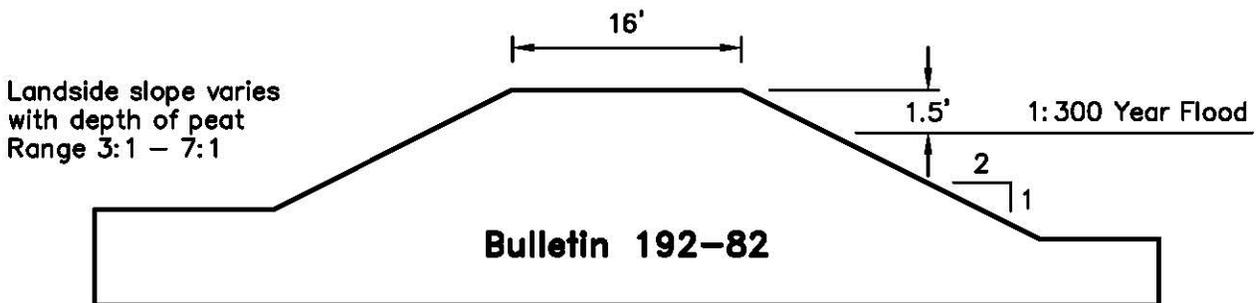
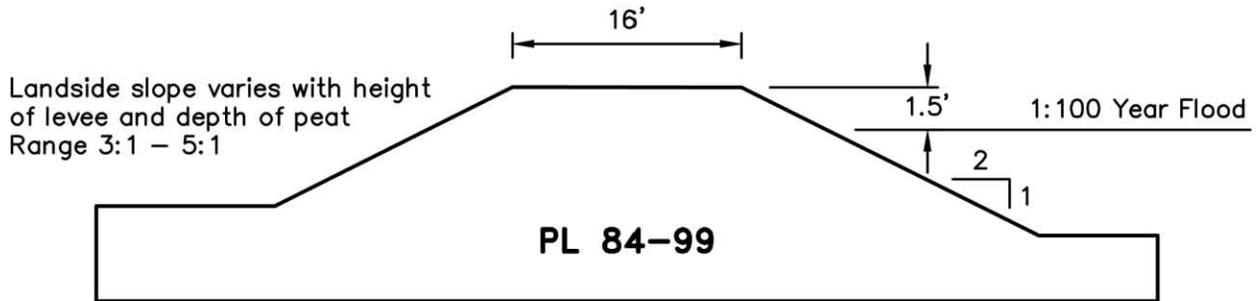
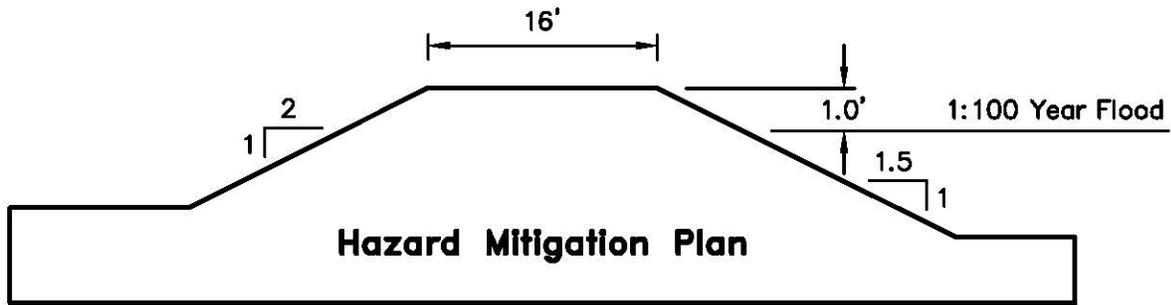
725 Court Street

P.O. Box 431

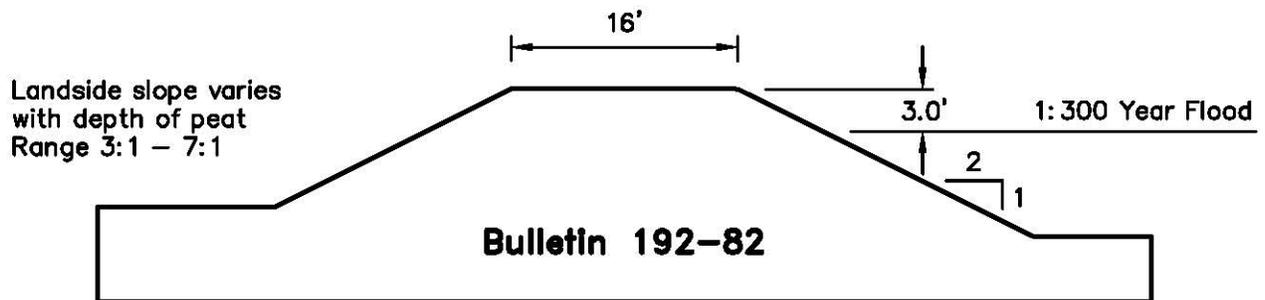
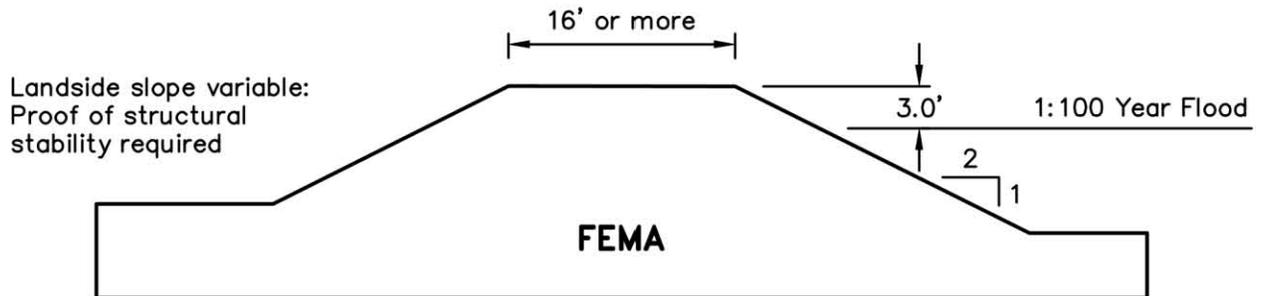
Martinez, CA 94553-0091

APPENDIX 1: Delta Levee Standards

Agricultural



Urban



APPENDIX 2: SAMPLE PERMIT APPLICATION

For District Use
Application No. _____
Application Fee \$ _____

APPLICATION FOR ENCROACHMENT PERMIT

1. Name and Address of Property Owner/Applicant:

Name of Owner/Applicant Address - ZIP Code Telephone No.

2. Location - Assessor's Parcel No. _____ District Tract No. _____

3. Description of encroachment _____

4. Required Exhibits - Please check those items submitted:

- a. _____ Location or vicinity map, to scale, showing location of proposed work in relation to known topographic features, to allow visitation to site and inspection of work.
- b. _____ A complete plan of the proposed work to scale, showing dimensions, and relationship of the proposed work to adjacent levee or waterway.
- c. _____ One or more cross sections of the levee, berm and waterway area with dimensions and elevations of the levee crown, levee toes, floodplain, low water, etc., with reference to a District identified bench mark (see Section VIII.7b of the District Regulations) should be indicated. Reference may be made to the District levee survey, where applicable.
- d. _____ Profile of existing or proposed levees, fills, or other obstructions on the levee or in the waterway or overflow areas with reference to a known datum.
- e. _____ Additional plans, sections, details which might be pertinent or useful in regard to the review of this application.
- f. _____ Proposed schedule of construction for development or project.
- g. _____ Provide any additional information that may assist the District in evaluating the proposed project's effect on the District's levee and the District's ability to normal maintenance and maintenance during times of emergency.

The undersigned Property Owner/Applicant agrees to reimburse the District for its costs and expenses associated with the review of this Application.

Property Owner/
Applicant's Signature(s) _____ Date _____

The Applicant is advised to consult with the District about encroachment limitations before preparing this application. This Application must be signed by the Property Owner.

APPENDIX 3: SAMPLE (BRADFORD ISLAND) NEWSLETTER WITH PROP 218 ASSESSMENT INSERT

Bradford Rec. Dist. 2059

Volume 1, No. 4

~Transparency In Our Public Agency~

November 2015

2015/16 ASSESSMENT STICKER SHOCK

If you haven't already paid it, the first installment of your 2015/16 property tax bill is late after today, Dec 10th. You probably did a double take at the amount so let us say this again...this high assessment is only for this first year. *See included insert*

"With four people you can create one very strong kind of energy, but if you can get 65 people working together, and swinging together, that's a whole other kind of energy."
Chuck Mangioni

Barrier Breached October 1, 2015:



The Victory II re-power is scheduled for the end of December to accommodate the corn harvest and taking livestock to market. (*Read more pg. 3*)

Work began in September to remove the Emergency Drought Barrier placed across False River this past July under the Governor's Executive Order.

The rock barrier was breached October 1 and the District has been informed that the entire structure, including the abutments will be removed. The king piles (shown in photo to left) will be cut off and capped.

We knew that Bradford Island played a critical role as one of the Eight Western Delta Islands but in the last five years, this tiny island has become pivotal to an increasing number of California's strategic water initiatives.

This newsletter provides a recap of events over the last five years that are impacting our assessments today.

It also provides an overview of initiatives and recent actions impacting the island.

We will also be providing you with an update of accomplishments, most recently in the past two years, as well as goals projected for the next two years.

Proposition 218 (Insert)

The District realizes that there may be some confusion regarding the Proposition 218 assessment election that was recently conducted and which passed by majority vote. The following information is provided to help clarify the issue.

District Finances: Contra Costa County is the de facto Treasurer of Bradford Reclamation District 2059 (the District). As such, the assessments levied by the District are collected by the County twice a year along with the parcel property tax and any other special fees. Beginning this year, you will see two District assessments on your tax bill—CB and TU. *See Example Figure 1*

Assessments: Code CB represents the \$313,605 assessment passed on May 4, 2010 that sunsets after this year. Starting in fiscal year 2016/17 (July 1, 2016 – June 30, 2017), assessment Code CB rolls back to the 2009/10 maximum assessment of \$158,000 and continues at that rate forever—it **cannot be raised**.

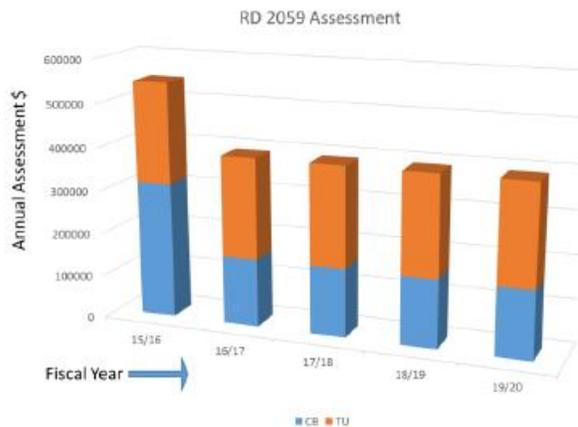
Code TU - O&M (Operations and Maintenance) represents the supplemental \$232,406.90 assessment approved on August 4, 2015 which begins fiscal year 2015/16 and sunsets in five years. *See Figure 2* If you would like to know what your 2009/2010 rate plus your new O&M (Operations and Maintenance) supplemental rate will be, please email a formal request to the District Manager at angelia_bradford@sbcglobal.net.

Figure 1

| SPECIAL TAXES & ASSESSMENTS | | | |
|-----------------------------|------|----------------|------------|
| DESCRIPTION | CODE | INFORMATION | AMOUNT |
| RECL DIST 2059 ✓ | CB | (925) 209-5480 | \$4,537.50 |
| MOSQUITO & VECTOR | DV | (925) 867-3400 | \$54.10 |
| EMERGENCY MED B | DY | (925) 646-4690 | \$20.00 |
| RECL DIST 2059 O&M ✓ | TU | (925) 209-5480 | \$3,981.52 |

The combined assessment will be at its highest rate (\$313,605 + \$232,406.90 = \$546,011.90) for **ONLY ONE (1)** year—the 2015/16 fiscal year. From that point forward, the District’s annual assessment through 2019/20 will be \$390,406.90, just **\$76,801.90 more than the 2010 Proposition 218 assessment**. *See Fig. 2*

Figure 2



RD 2059 PROPOSITION 218 FINANCIAL FACTSHEET

Your assessment dollars are used to fund the operation, maintenance and improvement of the District's flood control works to include its levees, ditches, and pump station. In addition, the assessments fund the District general operations to include administration, contract services and the ferry.

The economic downturn starting in 2008 had a substantial impact on the District. Numerous landowners experiencing difficulty paying their annual assessments, a pump station desperately in need of repair, increasing ferry repair bills, a ship running into the levee and a devastating fire on the island all contributed to financial problems for your District. The current assessment was not sufficient to cover District obligations.

The first Prop 218 to raise the landowner assessment cost the District ~\$35,000 and took two attempts to pass. The 1st attempt in February 2009 failed to pass. The 2nd attempt in May 2010 passed, but with a rollback in 5 years to 2009-2010 assessment rates—obligating the District to another Prop 218 in fiscal year 2014-2015 and costing the District another \$45,000+.

Between 2010 and 2015, a new pump station was built at a cost of \$365,000 and we finished the levee upgrade project. On the downside, old debts had gone too long, the District paid out \$49,000 in claims from the levee upgrade project, OES and the Bank of Stockton were calling its debts, and the State and County had serious reservations about the District's financial ability to continue.

2009 Proposition 218 Failed Attempt: Public hearing for voting on February 9, 2009 to increase assessment beginning in fiscal year 2009-2010 and continue indefinitely. The total maximum assessment would be \$295,000. Highlights include:

Capital Improvement Assumptions:

- Year 1 Pump Station relocation/reconstruction of \$682,062.60 paid off by 2028-2029
- Year 1 Non-reimbursable Subventions Ditch cleaning and culvert repair of \$148,593.68

Debt Service Assumptions:

- Year 2 begin annual P&I payment of \$95,300 on short term loan of \$830,656.28 assuming 15 yr @8%
- Outstanding OES (Office of Emergency Services) debt from 1983 flood (\$50,000) not included in debt reduction model
- Outstanding DFA (Delta Ferry Authority) debt not included in debt reduction model

Budget Assumptions:

- Year 2 addition of UnReimbursable Levee Maintenance (annual Ditch Cleaning) \$7575.97 with 5% escalation
- Year 2 Expanded Ferry Service \$15,000
- Rent, utilities, telephone, postage, etc not included in District O & M

2010 Proposition 218 (CB): Public hearing for voting on May 4, 2010 to increase assessment beginning in fiscal year 2010-2011. The total maximum assessment would be \$313,605. Highlights include:

Assessment Ballot Propositions:

- Proposed maximum annual assessment subject to an annual increase of 1.5% and shall expire after fiscal year 2015-2016.
- Beginning with fiscal year 2016-2017, the maximum annual assessment shall revert back to the 2009-2010 maximum annual assessment rates
- Replacement of the pump station by September 30, 2011 a condition or the maximum annual assessment shall revert back to the 2009-2010 maximum annual assessment rates
- The above propositions were conditional for a yes vote by Rosetta Resources, the current mineral rights holders

Capital Improvement Assumptions:

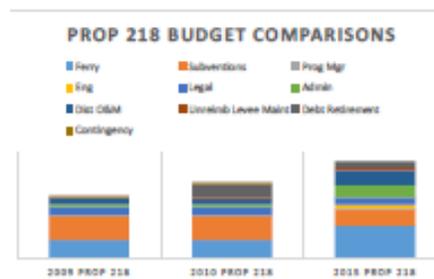
- Year 1 Pump Station relocation/reconstruction of \$682,062.60 paid off by 2028-2029
- Year 1 Non-reimbursable Subventions Ditch cleaning and culvert repair of \$148,593.68
- Year 1 Prop 218 proceeding of \$32,020

Debt Service Assumptions:

- Year 2 begin annual P&I pmt of \$95,300 on short term loan of \$862,676.28 assuming 15 yr @8%
- Outstanding DFA (Delta Ferry Authority) debt (\$41,740) not included in debt reduction model:

The current board began paying down all debts in fiscal year 2013 – 2014 and in two years has reduced its debt load by 50%--preventing the State from taking over the District. Remember, your Board members are landowners just like you. They pay the same assessments and are not reimbursed for their time, travel, or attendance at any meetings. We believe the SUPPLEMENTAL (TU) assessment will go down because:

- Pending collection of \$81,805.82 in past due assessments, the pump station debt is reduced to \$112,067.18
- All additional debt paid from pending foreclosure sale (past due assessments on parcels)
- With the debt reduced early, the Board has the option to reduce the assessment (proviso that future Boards act responsibly)



In closing, it is important to remember the District may not exist in 5 years due to pending State strategic initiatives; funding for the island will probably be radically different in 5 years which made a 5 year sunset to the August Prop 218 not a mistake but a necessity.

- Outstanding OES (Office of Emergency Services) debt from 1983 flood (\$50,000) not included in debt reduction model
- Carr and Ferrell legal invoices not included in debt reduction model (~ \$130,000)

Budget Assumptions:

- Additional hours for District Administrator approved by Board not captured in budget
- Year 2 addition of UnReimbursable Levee Maintenance (annual Ditch Cleaning) \$7575.97 with 5% escalation
- Year 2 Expanded Ferry Service \$15,000

2015 Proposition 218 (TU): Public hearing for voting on Aug 4, 2015 to increase assessment beginning in fiscal year 2015-2016. The total maximum assessment would be \$232,406.92. Highlights include:

Assessment Ballot Propositions:

- Final maximum annual assessment reduced by \$97,105.26 from initial proposed maximum annual assessment of \$329,512.18 based on landowner input from two public workshops as well as two special Trustee Board meetings
- A 5-yr sunset provision added based on landowner input, a review of strategic initiatives impacting the District, the anticipated reduction in ferry expenses due to the DWR funded upgrades to the Victory II, and the District's improved financial status due to its 50% debt pay down over the last two years

Revenue Assumptions:

- \$0 revenue from ferry tickets since unknown quantity. Landowners (according to Contra Costa County Assessor's Office listed as owner of parcel) no longer pay usage fee (tickets)

Debt Service Assumptions:

- OES debt (paid \$32,200 since Mar 2012) to be paid off in fiscal year 2015-2016
- Carr and Ferrell \$76,500 settlement paid in \$10,000 annual installments (first installment paid 2014-2015 fiscal year)
- Bank of Stockton debt (paid \$326,127 since 2014) retire \$23,000 in warrants annually.
- Should any past due assessments be paid in full, such revenue shall be used to retire additional warrants.

Budget Assumptions:

- Increased Administrative costs to cover payroll and additional approved hours for District Manager
- Increased District Engineer costs to reflect actual costs of engineering for District strategic initiatives such as Emergency Drought Barrier permit issues or flood control issues
- Increased Unreimbursable Levee Maintenance to accurately reflect costs for annual ditch cleaning
- Increased DFA (Delta Ferry Authority) to accurately reflect increased monthly assessment to anticipated \$9,900 per month

CONTRA COSTA LOCAL AGENCY FORMATION COMMISSION

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Lou Ann Texeira
Executive Officer

MEMBERS

Donald A. Blubaugh
Public Member

Federal Glover
County Member

Michael R. McGill
Special District Member

Mary N. Piepho
County Member

Rob Schroder
City Member

Igor Skaredoff
Special District Member

Don Tatzin
City Member

ALTERNATE MEMBERS

Candace Andersen
County Member

Sharon Burke
Public Member

Tom Butt
City Member

Stanley Caldwell
Special District Member

July 13, 2016

Michael Simmons, Foreperson
2015-16 Contra Costa County Civil Grand Jury
725 Court Street
P.O. Box 431
Martinez, CA 94553-0091

Dear Mr. Simmons:

On June 6, 2016, the Contra Costa Local Agency Formation Commission (LAFCO) received Grand Jury Report No. 1607, entitled “*Delta Levees in Contra Costa County: How Well Do We Protect This Vital Safety System?*”

On July 13, the Commission reviewed the draft response to the Grand Jury, provided input and directed LAFCO staff to submit a response prior to the September 9th deadline.

We hereby submit the response below which addresses the findings and recommendations contained in Grand Jury Report No. 1607.

FINDINGS

9. LAFCO’s Municipal Service Review (MSR) of reclamation districts, which it performs every five years, focuses on the financial and administrative management of the districts.

Response: *The respondent partially disagrees with the finding. In addition to reviewing financial and administrative issues, the LAFCO MSR includes information relating to growth and population; public facilities, public services, and infrastructure needs and deficiencies; opportunities for shared facilities; and accountability, governance structure and operational efficiencies.*

10. LAFCO relies on self-reported information from the districts without physical inspection, to evaluate how well the districts are maintaining the integrity of the levees for which they are responsible.

Response: *The respondent agrees with the finding.*

RECOMMENDATIONS

1. After identifying the necessary funding, LAFCO should consider including independent physical inspections of levee conditions, in addition to the self-reported evaluations of the conditions, in the MSRs of all County reclamation districts, if necessary by hiring an independent engineering firm to perform this function.

Response: *The recommendation will not be implemented because it is not warranted or reasonable.*

The power to create local governments and set their boundaries belongs to the California Legislature. The Legislature has delegated much of its authority over the boundaries of cities and special districts to county LAFCOs through the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (CKH Act) and the legislation that preceded it. LAFCO's purpose is to support Legislative policy discouraging sprawl, encouraging efficient extension of governmental services, protecting open space and agricultural lands, and recognizing the importance of providing housing for persons and families of all incomes (Gov. Code §56001). LAFCO's general powers and duties are enumerated in the CKH Act (Gov. Code §56375). The CKH Act also details LAFCO's responsibilities for conducting municipal service reviews (Gov. Code §56430), and establishing and updating local agency spheres of influence (SOIs) (Gov. Code §56425) - the SOI is "a plan for the probable physical boundary and service area of a local agency" (Gov. Code §56076).

The CKH does not provide LAFCO the right or responsibility to provide administrative oversight to local agencies, or to otherwise inspect or supplement the services provided by cities, counties or special districts, nor is LAFCO funded for this purpose (see Gov. Code §56381 which ties LAFCO's budget to "the purposes and programs of this chapter"). LAFCO's actions must be consistent with its legislative mandate. The physical evaluation of infrastructure is the responsibility of the service provider (i.e., city, county, special district), not LAFCO.

Please contact the LAFCO office if you have any questions or if we can be of further assistance.

Sincerely,

Mary N. Piepho
Chair, Contra Costa LAFCO