PROCEEDINGS OF THE BOARD OF DIRECTORS
COUNTY OF SANTA CRUZ
FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7 MEETING
WATSONVILLE CITY COUNCIL CHAMBERS
215 Union Street, Watsonville, CA
7:30 P.M.

March 16, 1999

****

A. Roll Call
B'. Consideration of Late Additions
C. Additions and Deletions

****

1. AS THE BOARD OF DIRECTORS OF THE SANTA CRUZ COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7, approve minutes of January 26, 1999

1.1 AS THE BOARD OF DIRECTORS OF THE SANTA CRUZ COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7, accept and file report on cooperative efforts with neighboring counties to identify flood control options for the Pajaro River Watershed Basin and return with a status report on June 17, 1999

1.2 AS THE BOARD OF DIRECTORS OF THE SANTA CRUZ COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7, adopt resolutions confirming the previously established 1999/2000 assessment rates for Zone 7, setting Thursday, June 17, 1999 at 7:30 p.m. for a public hearing on the proposed 1999/2000 assessment rates, and overruling protests and confirming written report on drainage rates; and direct the Clerk of the Board to take related actions

1.3 AS THE BOARD OF DIRECTORS OF THE SANTA CRUZ COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7, accept and file report on the Pajaro River and Salsipuedes/Corralitos Creek flood control, direct Zone 7 staff to write to the Army Corps of Engineers in support of Option C, the 70-year National Economic Development Plan and take related actions

1.4 ORAL COMMUNICATIONS – The Board will receive Oral Communications following completion of all other items on the Agenda. Any person may address the Board during its Oral Communications period. Presentations must not exceed five minutes, must be directed to an item not listed on today's Agenda, and must be within the jurisdiction of the Board. Board members will not take action or respond immediately to any Oral Communications presented, but may choose to follow up at a later time, either individually, or on a subsequent District Agenda.

WRITTEN CORRESPONDENCE AGENDA – The Zone 7 Board of Directors acknowledges receipt of the following items of correspondence which are on file with the Zone 7 Secretary. Copies of all items listed on this Written Correspondence Agenda have been circulated to all members of the Zone 7 Board.

I. The Board of Directors has received the following items of correspondence:

a. Letter of Jeff Almquist, Chairperson of the Santa Cruz County Board of Supervisors, Oscar Rios, Mayor of the City of Watsonville, and Betty Bobeda, Chairperson of the Santa Cruz County Flood Control and Water Conservation District, Zone 7, to the California Water Commission dated March 1, 1999, regarding the Pajaro River Basin Flood Control

County of Santa Cruz 190

BOARD OFSUPERVISORS

701 OCEAN STREET, SUITE 500, SANTA CRUZ, CA 95060-4069

(831) 454-2200 FAX: (831) 454-3262 TDD: (831) 454-2123

JANET K. BEAUTZ	WALTER J. SYMONS	MARDI WORMHOUDT	TONY CAMPOS	JEFF ALMQUIST
FIRST DISTRICT	SECOND DISTRICT	THIRD DISTRICT	FOURTH DISTRICT	FIFTH DISTRICT

March 1, 1999

California Water Commission
1416 9th Street, Room 1148
Sacramento, CA 95814

RE: PAJARO RIVER BASIN FLOOD CONTROL

Dear Commissioners:

This letter is to request your Commission's assistance and support in requesting that the United States Congress provide a mid-year appropriation of $100,000 in this year's federal budget for a Pajaro River Basin Flood Control Study by the United States Army Corps of Engineers.

The Pajaro River Watershed Basin encompasses approximately 1,300 square miles of land within San Benito, Santa Clara, Santa Cruz and Monterey Counties. The Pajaro River then makes a natural boundary between Santa Cruz and Monterey Counties before emptying into the Monterey Bay National Marine Sanctuary. Numerous flood events have plagued areas adjacent to the river over the years, particularly in the final 10 miles before it reaches the Bay. The Army Corps constructed levees along the lower Pajaro River System in Santa Cruz and Monterey Counties in 1949; however, the flooding has continued. The first instance of levee overtopping occurred in 1955. More recently failure of the levee systems, with resultant severe flooding, has occurred in two of the past five years.

Last summer, the four counties, the Cities of Watsonville, Gilroy, Morgan Hill and Hollister, the Santa Clara Valley Water District, the San Benito County Water District, and the Santa Cruz County Flood Control and Water Conservation District Zone 7 all adopted resolutions agreeing to work cooperatively toward addressing flooding problems within the Pajaro River Basin. One of the first steps identified in this cooperative effort is the need for the Army Corps to prepare a basin-wide flood control study of the Pajaro River System. At this time, the County of Santa Cruz Flood Control and Water.Conservation District Zone 7 would act as the project sponsor. When a more formalized relationship is developed between the many interested agencies, project sponsorship could transition to a multi-agency jurisdiction.

a

The Army Corps of Engineers has indicated that this study can be accomplished under existing Congressional authorizations if the necessary appropriations are made available. Unfortunately, local efforts to include the necessary funds in the final 1999 budget were unsuccessful. It is hoped that with your Commission's, support, together with more concerted effort from our numerous benefitting jurisdictions, that a request for these mid-year appropriations will be approved.

The County of Santa Cruz, in concert with the City of Watsonville and Monterey County, has been working for many years with the Army Corps to plan, design, and construct flood control improvements along the lower Pajaro River and two of its tributaries, Salsipuedes and Corralitos Creeks. These lower Pajaro River improvements are intended to protect the City of Watsonville, the town of Pajaro, and adjacent unincorporated areas in both counties from flooding during 50 to 100 year storm events. A brief summary of the history, goals and key issues associated with these efforts is attached. We believe that approval of funding and completion of a Pajaro River Basin Flood Control Study is an important first step in our efforts to secure necessary federal and State funds for these critically needed flood control projects.

We will have representatives available at your March 5, 1999, meeting to respond to any questions your Commission might have. In addition, please feel free to contact Peter Cota-Robles, Pajaro River Flood Control Coordinator, by telephone at 831-454-2816 or by e-mail at <dpw257@co.santa-cruz.ca.us>. Thank you for your consideration of this request.

Sincerely,

JEFF ALMQUIST, Chairperson
Board of Supervisors

OSCAR RIOS, Mayor
City of Watsonville

BETTY BOBEDA, Chairperson
Flood Control and Water Conservation District Zone 7

Attachment

cc: Congress Member Sam Farr; Senator Bruce McPherson; Assembly Member Fred Keeley; Assembly Member Peter Frusetta; Monterey County; San Benito County; Santa Clara County; City Council, City of Watsonville; City of Gilroy; City of Morgan Hill; City of Hollister; Santa Clara Valley Water District; San Benito County Water District; Santa Cruz County Flood Control and Water Conservation District Zone 7; Santa Cruz County Administrative Office; Santa Cruz County Public Works Department; Army Corps of Engineers, San Francisco

1332A6

ACTION SUMMARY MINUTES

COUNTY OF SANTA CRUZ
FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7 MEETING
BOARD CHAMBERS, ROOM 525

January 26, 1999

****

A. Roll Call
Voting Members Present: Directors Beautz, Symons, Wormhoudt, Campos, Almquist, Carroll and Chair Bobeda
Voting Members Absent: None
Non-Voting Members Present: None
Non-Voting Members Absent: Rider, Clifton, Meschi and Cooley

B. Consideration of Late Additions

C. Additions and Deletions

D. Oral Communications - No one addressed the Board

****

1. AS THE BOARD OF DIRECTORS OF THE SANTA CRUZ COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7, APPROVED special meeting minutes of November 24, 1998

Motion made by Director Almquist, duly seconded by Director Symons:

Ayes:	Beautz, Symons, Wormhoudt, Almquist, Carroll and Bobeda
Noes:	None
Abstain:	Campos
Absent:	None

1.1 AS THE BOARD OF DIRECTORS OF THE SANTA CRUZ COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7, AUTHORIZED the Chairperson to call for nominations and elect a new Chairperson and Vice Chairperson for 1999

Motion made by Director Beautz, duly seconded by Director Symons to re-re-elect Director Bobeda as Chairperson:

Ayes:	Beautz, Symons, Wormhoudt, Campos, Almquist, Carroll and Bobeda
Noes:	None
Abstain:	None
Absent:	None

Motion made by Director Beautz, duly seconded by Director Symons to elect Director Campos as Vice-Chairperson:

Ayes:	Beautz, Symons, Wormhoudt, Campos, Almquist, Carroll and Bobeda
Noes:	None
Abstain:	None
Absent:	None

1.2 AS THE BOARD OF DIRECTORS OF THE SANTA CRUZ COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7, APPROVED the 1999 Zone 7 meeting schedule

Motion made by Director Almquist, duly seconded by Director Campos:

Ayes:	Beautz, Symons, Wormhoudt, Campos, Almquist, Carroll and Bobeda
Noes:	None
Abstain:	None
Absent:	None

1.3 AS THE BOARD OF DIRECTORS OF THE SANTA CRUZ COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7, ACCEPTED AND FILED status report on cooperative efforts with neighboring counties to assess flood risks throughout the Pajaro River Watershed Basin and directed a further report be presented on or before March 23, 1999; with an additional directive that the Zone 7 Board of Directors send a letter to the Army Corps of Engineers and Representative Farr in order to keep this issue in the forefront

Motion made by Director Campos, duly seconded by Director Wormhoudt:

Ayes:	Beautz, Symons, Wormhoudt, Campos, Almquist, Carroll and Bobeda
Noes:	None
Abstain:	None
Absent:	None

1.4 AS THE BOARD OF DIRECTORS OF THE SANTA CRUZ COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7, ACCEPTED AND FILED status report on the Pajaro River/Salsipuedes Creek Flood Control efforts and directed Public Works to return March 23, 1999 with a detailed report on flood protection alternatives

Motion made by Director Symons, duly seconded by Director Campos:

Ayes:	Beautz, Symons, Wormhoudt, Campos, Almquist, Carroll and Bobeda
Noes:	None
Abstain:	None
Absent:	None

1.5 ORAL COMMUNICATIONS - No one addressed the Board

Approved: _____
Chair, Zone 7 Board

Attest: _____
Clerk of the Board

Date: _____

County of Santa Cruz

FLOOD CONTROL AND WATER CONSERVATION DISTRICT - ZONE 7

701 OCEAN STREET, ROOM 410, SANTA CRUZ, CA 95060-4070
(831) 454-2160 FAX (631) 454-2385 TDD (831) 454-2123

JOHN A. FANTHAM
DISTRICT ENGINEER

AGENDA: MARCH 16, 1999

March 5, 1999

BOARD OF DIRECTORS-ZONE 7
Santa Cruz County Flood Control
and Water Conservation District
701 Ocean Street
Santa Cruz, California 95060

SUBJECT: PAJARO RIVER WATERSHED BASIN FLOOD CONTROL

Members of the Board:

On January 26, 1999, your Board received the last status report on efforts to work cooperatively with Santa Clara, San Benito, and Monterey counties to address flood control problems within the Pajaro River Basin. Your Board directed that another status report be presented today, and in addition, directed that letters be sent to the Army Corps of Engineers and Representative Farr to keep the issue in the forefront.

As indicated in the last report (Attachment I), the Army Corps has not been able to proceed on developing a Pajaro River Basin Flood Control Study because the necessary $100,000 appropriations were not included in the 1999 federal budget. In an attempt to remedy this situation, staff prepared a letter (Attachment II) to the California Water Commission requesting its support for a mid-year addition to the federal budget. Congressman Farr and the Army Corps received copies of the letter. In addition, staff has met with Army Corps representatives and discussed the study by telephone on numerous occasions to keep the issue in the forefront. The California Water Commission has a great deal of influence on federal flood control funding, and if it is supportive, staff proposes next to prepare a written request that Congressman Farr also support the $100,000 mid-year addition. The Commission meets Friday, March 5, 1999; therefore, a further verbal update on this matter will be provided to your Board at your March 16, 1999, meeting.

Staff has also sent a letter to Assemblymember Keeley (Attachment III) updating his office on the status of the four-county effort and indicating the County's continued support for formalizing the relationship between the various Pajaro River Basin agencies, as well as requesting his continued assistance.

It is therefore recommended that your Board accept and file this report on cooperative efforts with neighboring counties to identify flood control options for the Pajaro River Watershed Basin and direct that the next status report be presented on June 17, 1999.

Yours truly,

JOHN A. FANTHAM
District Engineer

PCR:mg

Attachments

RECOMMENDED FOR APPROVAL:

County Administrative Officer

copy to: Zone 7 Board of Directors
Carlos J. Palacios, Watsonville City Manager
Public Works Department

PJM

County of Santa Cruz 199

FLOOD CONTROL AND WATER CONSERVATION DISTRICT - ZONE 7

701 OCEAN STREET, ROOM 410, SANTA CRUZ, CA 950604070
(831) 454-2160 FAX (831) 454-2385 TDD (831) 454-2123

JOHN A. FANTHAM
DISTRICT ENGINEER

AGENDA: MARCH 16, 1999

March 5, 1999

BOARD OF DIRECTORS-ZONE 7
Santa Cruz County Flood Control
and Water Conservation District
701 Ocean Street
Santa Cruz, California 95060 .

SUBJECT: ZONE 7 ASSESSMENT RATES FOR 1999/2000

Members of the Board:

As per Government Code, Section 25210, your Board must take annual actions related to the Zone 7 assessments. The existing assessment formula is based on parcel size and land use. As provided in the Santa Cruz County Flood Control and Water Conservation District Engineer's Report adopted by your Board on April 2, 1991, the assessment rate for the fiscal year 1999/2000 is $49.01 per single family residence based on a 2.1 percent CPI adjustment. The engineer's report is on file in the Clerk of the Board's office for public review.

As in previous years, your Board must now notice and conduct a public hearing to consider any protests on the 1999/2000 assessments.

It is therefore recommended that the Board of Directors take the following action:

1. Adopt the attached resolution confirming the previously established 1999/2000 assessment rates for Zone 7.

2. Adopt the attached resolutions setting Thursday, June 17, 1999, at 7:30 p.m. as the date and time for a public hearing on the proposed 1999/2000 assessment rates and date for confirming the benefit assessment report.

1.2

3. Direct the Clerk of the Board to publish the attached notice of public hearing on or before May 3, 1999, and then again once a week for two weeks prior to the hearing in a newspaper of general circulation.

Yours truly,

For JOHN A. FANTHAM
District Engineer

PCR:mg

Attachments

RECOMMENDED FOR APPROVAL,:

County Administrative Officer

copy to: Zone 7 Board of Directors
Carlos J. Palacios, Watsonville City Manager
Public Works Department (CSA Administration)

BEFORE THE ZONE 7 BOARD OF DIRECTORS
OF THE COUNTY OF SANTA CRUZ FLOOD CONTROL
AND WATER CONSERVATION DISTRICT
STATE OF CALIFORNIA

201

RESOLUTION NO. ___

On the motion of Director
duly seconded by Director
the following resolution is adopted:

RESOLUTION SETTING HEARING
ON ASSESSMENT RATE REPORT FOR ZONE 7

WHEREAS, the Board of Directors has determined the nature, extent, and cost of the services to be provided within Zone 7 for the 1999/2000 fiscal year; and

WHEREAS, on or before May 3, 1999, said assessment rate report will be placed on file with the Clerk of the Board.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors that Thursday, June 17, 1999, at the hour of 7:30 P.M. in the Watsonville City Council Chambers, 250 Main Street, Watsonville, California, the Board of Directors will conduct a public hearing on the report of proposed assessment rates for Zone 7 for the 1999/2000 fiscal year.

BE IT FURTHER RESOLVED AND ORDERED that at the time, date, and place above, the Board of Directors shall hear all objections or protests, if any, to the report.

BE IT FURTHER RESOLVED AND ORDERED that the Clerk of the Board of Directors shall cause notice of the filing of the reports and the time, date, and place of hearing, to be published on or before May 3, 1999, and once a week for two successive weeks prior to the date set for hearing, in a newspaper of general circulation printed and published in Santa Cruz County, pursuant to Government Code Section 6066.

PASSED AND ADOPTED by the Board of Directors of the Santa Cruz County Flood Control and Water Conservation District, Zone 7, State of California, this day of 1999, by the following vote:

AYES: DIRECTORS

NOES: DIRECTORS

ABSENT: DIRECTORS

_____
Chairperson of said Board

ATTEST: _____
Clerk of said Board

Approved as to form:

_____ 3/5/99
Chief Assistant County Counsel

Distribution: County Counsel, Public Works

Z7ASSESR.DOC

BEFORE THE BOARD OF DIRECTORS
OF THE SANTA CRUZ COUNTY FLOOD CONTROL AND WATER
CONSERVATION DISTRICT ZONE 7, SANTA CRUZ COUNTY, CALIFORNIA

RESOLUTION NO. ___

On the motion of Director
duly seconded by Director
the following resolution is adopted:

A RESOLUTION OF THE SANTA CRUZ COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT ZONE 7, OVERRULING PROTESTS AND CONFIRMING WRITTEN REPORT ON DRAINAGE ASSESSMENT RATES FOR THE FISCAL YEAR 1999/2000

WHEREAS, a written assessment rate report was filed on or before May 3, 1999, in the Office of the Clerk of the Board containing a description of each parcel of real property receiving services from the District and the amount of the assessment to be collected on the County Tax Roll for each parcel for the 1999/2000 fiscal year; and

WHEREAS, on March 16, 1999, this Board appointed the time and place of public hearing on said report and directed notice, which notice was duly given in the manner provided by law as appears by the affidavits of publication on file in the office of the Clerk of the Board; and

WHEREAS, said matter came on regularly for hearing at the time and place fixed and all written protests and other communications were publicly read at said meeting and all persons desiring to be heard were fully heard.

NOW, THEREFORE, IT IS DETERMINED AND ORDERED, as follows:

1. That objections to, and protests against, said report were not made by the owners of a majority of the separate parcels of property described in the report;

2. That all objections to and protests against said report have been heard by this Board and that said objections and protests be, and each of them is hereby overruled;

3. That said report be, and it is hereby adopted in full without revision and modification pursuant to Water Code Appendix Sections 28, 173 and 191, and Zone 7 Rules and Regulations Section 3.5, and that the charges as specified in said report shall be collected on the tax roll of the County of Santa Cruz, in the manner provided by law;

4. That the Clerk of the Board be, and she is hereby directed to file with the County Auditor of Santa Cruz County, on or before the 10th day of August, 1999, a copy of said report, upon which shall be embossed over her signature a statement that the report has been finally adopted by the Board of Directors of the Santa Cruz County Flood Control and Water Conservation District Zone 7;

5. The County Auditor of Santa Cruz County shall, upon receipt of said report, enter the amounts of the charges against the respective lots or parcels as they appear on the assessment roll for the fiscal year 1999/2000.

PASSED AND ADOPTED by the Board of Directors of the Santa Cruz County Flood Control and Water Conservation District, Zone 7, State of California, this - d a y o f 1999, by the following vote:

AYES: DIRECTORS

NOES: DIRECTORS

ABSENT: DIRECTORS

_____

Chairperson of said Board

ATTEST: _____

Clerk of said Board

Approved as to form:

Samuel Torres 3/5/99

Chief Assistant County Counsel

Distribution: County Counsel
Public Works

BEFORE THE ZONE 7 BOARD OF DIRECTORS
OF THE COUNTY OF SANTA CRUZ FLOOD CONTROL AND
WATER CONSERVATION DISTRICT STATE OF CALIFORNIA

204

RESOLUTION NO.

On the motion of Director
duly seconded by Director
the following resolution is
adopted:

A RESOLUTION CONFIRMING PREVIOUSLY ESTABLISHED ASSESSMENT RATES
FOR THE 1999/2000 FISCAL YEAR FOR ZONE 7,
SANTA CRUZ COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

BE IT RESOLVED by the Board of Directors of the Santa Cruz County Flood Control and Water Conservation District as follows:

Section 1. Assessment rates for parcels within Zone 7 for the 1999/2000 fiscal year are as follows:

LAND USE	1999/2000 RATE PER YEAR	
Residential Property	$ 49.01	per SFRU* per year
Agricultural Acreage	$ 6.80	per acre per year
Unimproved Acreage	$ 0.68	per acre per year
Commercial/Industrial Acreage	$ 326.72	per acre per year
Churches/Schools	$ 81.68	per acre per year

*Single Family Residence Unit (SFRU) is defined below:

Single Family Residence	1 unit
2 SFR's on a single parcel	2 units
3-4 SFR's on a single parcel	3 units
Mobile Home Parks	0.67 units per space
Duplex	1.4 units
Triplex	1.7 units
Fourplex	2 units

Structures greater than four units are apartments and are charged as commercial acreage.

Section 2. Assessment Rate Exemptions: Assessments will not be levied on parcels in the following categories:

1. Parcels in the agricultural or unimproved land use category with total assessed valuation of $5,000.00 or less.

2. Common Areas with no structures.

3. Mobile homes on rented park space.

Section 3. This Resolution shall take effect July 1, 1999.

PASSED AND ADOPTED by the Board of Directors of the Santa Cruz County Flood Control and Water Conservation District, Zone 7, State of California, this o ____ day f 1999, by the following vote:

AYES: DIRECTORS

NOES: DIRECTORS

ABSENT: DIRECTORS

_____
Chairperson of said Board

ATTEST: _____
Clerk of said Board

Approved as to form:

3/5/99
Chief Assistant County Counsel

Distribution: County Counsel
Public Works

County of Santa Cruz

FLOOD CONTROL AND WATER CONSERVATION DISTRICT -ZONE 7

701 OCEAN STREET, ROOM 410, SANTA CRUZ, CA 95060-4070
(831) 454-2160 FAX (831) 454-2385 TDD (831) 454-2123

JOHN A. FANTHAM
DISTRICT ENGINEER

AGENDA: MARCH 16, 1999

March 5, 1999

BOARD OF DIRECTORS-ZONE 7
Santa Cruz County Flood Control
and Water Conservation District
701 Ocean Street
Santa Cruz, California 95060

SUBJECT: PAJARO RIVER AND SALSIPUEDES/CORRALITOS CREEK FLOOD CONTROL

Members of the Board:

On January 26, 1999, your Board received a status report on efforts to improve flood control along the Pajaro River and Salsipuedes/Corralitos Creeks. Staff was directed to return on this date with a further report.

Background

In March 1994 the Army Corps released a Reconnaissance Report on the Pajaro River, which concluded that there was no flood control alternative for the Pajaro River mainstem with a positive benefit/cost ratio. However, the report also concluded that there were flood control alternatives with positive benefit/cost ratios for Salsipuedes and Corralitos Creeks. In response to the Reconnaissance Report, the Zone 7 Board directed staff to continue working with the Army Corps to pursue a flood control project for Salsipuedes/Corralitos Creeks.

Pajaro River

In 1995 the Pajaro River overtopped its levees resulting in extensive flooding. As the extent of damages from the flooding became documented, staff urged the Army Corps to review its previous economic analysis based on the actual damages and reevaluate the benefit/costs of a Pajaro River mainstem flood control project. In September 1998 the Army Corps completed a Pajaro River Section 2 16 Initial Appraisal which indicates that there is a Pajaro River flood control

alternative with a positive benefit/cost ratio, based on the revised economic data. The appraisal also concluded that there is potential Federal interest in flood control improvements to the existing levee system. In addition, the appraisal recommended that the Army Corps proceed to a Section 905 (b) Expedited Reconnaissance Phase, with study costs 100 percent Federally financed and not to exceed $100,000.

The Expedited Reconnaissance Phase approach would initiate the same process on the Pajaro River mainstem which is currently under way for the Salsipuedes/Corralitos Creek flood improvements. We are recommending that your Board direct staff to continue working with the Army Corps and our local, State, and Federal representatives to see that authorization and appropriations for the Expedited Reconnaissance Phase studies are forthcoming.

Salsipuedes/Corralitos Creeks

The current Salsipuedes/Corralitos Creek levee system is estimated only to offer protection from storms of less than an eight-year intensity. This means that in any given year there is approximately a 12 percent chance that the existing levees will be overtopped.

As your Board is aware, the Army Corps has been developing alternatives for flood control improvements to the Salsipuedes/Corralitos Creek levee system. In January they held an "F4 Milestone" meeting where different Army Corps sections working on the project reviewed the many elements of its current design study, the General Reevaluation Report (GRR). Zone 7 staff was invited to attend and hear the findings to date. At that meeting, we were informed that the Army Corps has analyzed four basic alternatives plus a "no-action plan." These alternative designs, cost estimates, and current projected local costs are described in the attached excerpt (Attachment I) from the GRR. The entire draft GRR with appendices is very lengthy and is on tile with the Clerk of the Board. The four alternatives would provide protection from different storm intensities: 20 year (Option A), 50 year (Option B), 70 year (Option C) and the Federal Emergency Management Agency's (FEMA) 100 year (Option D). Based on the Army Corps' economic analysis of these alternatives they have concluded that Option C maximizes the net National Economic Development (NED) benefits. As such, the Army Corps regulations provide that this is the highest level of flood protection which they will recommend for the next phase of design.

Recently Zone 7 staff met with representatives of the City of Watsonville Public Works Department to review the four options and to develop a recommendation to your Board. Detailed comments and questions were developed and will be transmitted to the Army Corps in the near future. The most significant issues identified by staff are highlighted in the analysis below. In general, it is anticipated that answers to many of these questions will need to be developed as the design study proceeds.

Analysis

There are several key issues which are common to Options B, C, and D. First, all three options propose flood walls along the existing levee tops which would be higher than six feet in some areas. This could be problematic for a variety of reasons including aesthetics, their impact on maintenance operations, possible security problems, graffiti problems, and a general reduction in the recreational enjoyment of the levee roads, to name a few. Also, the current conceptual designs do not include paving of levee top roads or recreational amenities such as benches, landscaping, and signage. Staff recommends that as the design process progresses, a design review committee be established to provide guidance on these and similar issues.

There are also several key engineering questions which could significantly impact project local costs, such as whether the Highway 152 and 129 bridges need to be replaced or retrofitted. The Army Corps has informed staff that this is in part due to the fact that the California Department of Transportation is responsible for portions of this determination, and they have not yet completed this work. (Under standard Army Corps cost-sharing provisions, most costs associated with bridge replacement are a local responsibility). Also, under Options C and D there are significant questions about the potential impacts associated with a proposed 15-foot berm at the downstream end of College Lake. This use of College Lake could work effectively as a joint project with the Pajaro Valley Water Management Agency to address both flood control and groundwater recharge/irrigation needs. However, potential impacts on existing farming operations, the natural environment, and on upstream facilities, including Paulsen-Whiting Road will need to be carefully evaluated and could make this feature unworkable. Finally, all four options involve various types of erosion control work to maintain the stability of the existing benches and levees. These engineering issues will need to be carefully analyzed and evaluated as the design work proceeds.

One issue common to Options A, B, and C is that none would relieve property owners within the flood plain areas from the need to continue to participate in the National Flood Insurance Program if they are currently required to do so by their mortgage lender. Only Option D, the FEMA 100-year plan would relieve residents of this burden.

Finally, there is also concern over whether the design as currently proposed adequately addresses fisheries and riparian habitat needs. Very little if any habitat enhancement is currently incorporated in the project. This could result in significant difficulty in gaining necessary federal and state environmental approvals. Also, unless adequate measures are incorporated directly in the project, more expensive offsite mitigation will likely be required. Incorporating habitat enhancement could also improve recreational values. To insure that these environmental issues are carefully addressed, it will be important to include representatives from key local environmental organizations in the design review process.

In reviewing the four basic options, staff concluded that it would be advisable to pursue the highest level of flood protection reasonably possible. While FEMA 100-year protection would be ideal, staff felt the need for an average flood-wall height of 7 1/2 feet (or substantial loss of adjacent farm land) combined with the high cost and lack of Army Corps support made this option unlikely to be achievable. While Option C (the NED plan) includes the College Lake berm which may create some difficulties, it offers a relatively high 70-year level of protection, There are also a number of other issues with this alternative as discussed above but staff believes they could be successfully resolved. Option B (50 year plan) provides what staff considers a minimally acceptable level of protection and has many of the same issues as Option C. Staff considers Option A (20-year plan) to be insufficient and the no-action plan to be unacceptable.

Summary

For the reasons discussed above, Zone 7 and City of Watsonville Public Works staff concur with the Army Corps that Option C (the NED Plan) appears to be the best alternative. Local costs associated with this alternative are currently estimated at $12 million. If your Board concurs that Option C is preferable, no specific action is required. The Army Corps will then continue its design work focussing on this alternative. If your Board determines that another option is preferable, that option will be termed the "Locally Preferred Alternative." If Option A or B, which offer lower levels of protection and are less costly, is selected, the Army Corps has indicated they will continue design studies focussing on this Locally Preferred Alternative. If Option D is selected as the Locally Preferred Alternative, the Army Corps may agree to develop that alternative; however, federal funding contributions exceeding those of the NED plan are not typically permissible, resulting in significantly higher local costs.

Local Funding

Attachment III provides a summary of the Army Corps' current estimated total project costs and local costs for the various Pajaro River and Salsipuedes/Corralitos Creek levee flood protection improvement alternatives. The local costs indicated in Attachment II are based on the current Army Corps standard 65/35 federal/local cost share formula where the local agency is also responsible for bridge replacement, offsite mitigation, land acquisition, construction easements and similar costs. Under this cost/share approach, total local costs for both projects are estimated to range from $30 to $64 million depending on the project alternatives pursued. Staff estimates that Zone 7 would currently have great difficulty generating more than $3 million toward a local match. This is particularly true in view of the potential costs and impacts on the District's ability to bond resulting from the law suits arising from the 1995 floods. Additional funds might be generated from Monterey County, upstream counties, assessment districts and special local taxes. However, it is highly improbable that we will be able to generate funding even approaching $30 million locally.

Because of this situation, staff is currently working with local, state and federal representatives to pursue other funding approaches. These funding efforts are critical if the necessary flood protection projects are to proceed. Staff proposes to continue working aggressively with local representatives to develop the broad based bipartisan political base, which will be necessary for these efforts to succeed. Staff also proposes to contract for specialized assistance in Washington, D.C. and Sacramento to support these goals. Sufficient funds are available in the existing Zone 7 budget to fund this work through the end of the fiscal year.

It is therefore recommended that your Board take the following action:

1. Direct District staff to write to the Army Corps of Engineers in support of Option C, the 70-year (NED) plan and to transmit the general comments and issues identified in this report together with any detailed technical or engineering questions or concerns.

2. Direct Zone 7 staff to continue working with the Army Corps and our local, State and Federal representatives to see that Federal authorization and appropriations for the Expedited Reconnaissance Phase studies for Pajaro River mainstem flood control are forthcoming; and

3. Direct Zone 7 staff to continue working with the Army Corps and our local, State and Federal representatives to see that the General Reevaluation Report (GRR) is completed and that necessary Federal authorization and appropriations are approved for continuing the design process to provide flood control improvements for the Salsipuedes/Corralitos Creek levees; and

4. Direct staff to work with our local, State and Federal representatives as outlined in this report to achieve the necessary Federal and/or State approvals to reduce the required local matching funds for the Pajaro River and Salsipuedes/Corralitos Creek levee improvement projects to a reasonable and affordable amount.

Yours truly,

JOHN A. FANTHAM
District Engineer

PCR:mg

Attachments

RECOMMENDED FOR APPROVAL:

County Administrative Officer

copy to: Zone 7 Board of Directors
Army Corps of Engineers
City of Watsonville Public Works
Congressman Sam Farr
State Senator Bruce McPherson
Assemblymember Fred Keeley
County Administrative Office
Public Works

SCCM

3.3.2 No-Action Plan (Without-Project Condition)

The no-action plan is synonymous with the without-project condition. The no-action plan assumes that the Federal Government would implement no future flood control project, structural or non-structural in the project area. Those non-structural flood control alternative plans already implemented will continue to be utilized, such as NFIP. The Flood Disaster Protection Act of 1973 requires that local communities participate in the NFIP in order to continue to be eligible for financing through Federally financed institutions. The NFIP also specifies that participating communities require new development in the floodplain commensurate with an expected annual probability of 1 percent (100-year event) to be flood-proofed. If no action is taken, the existing level of protection from independent flood events on the Pajaro River and Salsipuedes/Corralitos Creeks would be an expected annual non-exceedance probability of 12 percent (12-year event) and 4 percent (25-year event), respectively. The no-action plan would result with the continuation of an expected equivalent annual loss of $19,160,000 (1998 price level) in flood damages.

3.3.3 Creek Floodwall (and/or Levee) Plan w/ Alternative Levels of Protection

3.3.3.1 Creek Floodwall (and/or Levee) Plan-Option A (4.7% Exp Ann Non-Exceed Prob)

a. General Plan Description. This plan option consists of concrete capped sheetpile floodwalls with an average wall height of 0.7-meters (2.3-feet). This plan option would provide a level of protection commensurate with an expected annual non-exceedance probability of 4.7% on Salsipuedes and Corralitos Creeks. The maximum wall height on the right bank is 1.4 meters at station 47+78 on the Corralitos Creek, just upstream from Highway 152. The maximum wall height on the left bank is 1.7 meters at station 55+17 on the Corralitos.Creek, just downstream from Green Valley Road. The minimum wall height is 0.1 meters at stations 14+43 and 46+65 for the right bank. The minimum wall height is also 0.1 meters at stations 10+77and 41+68 for the left bank.

The floodwall alignment, looking downstream, is approximately 1,400 linear meters (4,600-feet) on the right bank and 3,840 linear meters (12,600-feet) on the left bank. There are intermittent breaks in the alignment, where the floodwall ties into high ground. Approximately 1,160 linear meters on the right bank and 430 linear meters on the left bank of the floodwall alignment will be constructed on top of an existing levee that was constructed in 1949 by the Corps. The remaining 1,470 linear meters on the right bank and 3,020 linear meters on the left bank will be constructed on terrain that consists primarily of agricultural lands, as well as some residential and commercial lands. See Figure 3.3.3.1.

The composition of the floodwall consists of sheet pile that is driven down into the crown of the existing levee and/or into the ground where there is no levee. A concrete cap with a width of 0.3 meters reinforces the floodwalls. An access road for the operation and maintenance (O&M) will be constructed on the crown of the

existing levee and on the ground adjacent to the floodwall where there is no levee. The O&M access road will be surfaced with an aggregate base course that is 0.15 meters thick. See Figure 3.3.3.4.

Erosion control measures have been included into the plan and consist of four components: hard points, tiebacks, transitions, and hydroseeded erosion control matting. The hard points spaced at 15 meter intervals through out the erosive reach will reduce the water velocity along the bank so as a vegetated bank between the hard points will be able to resist the erosive flows of the river. The tieback structure upstream and downstream of the hard points will prevent flanking of the hard point structures by the river. The toe stones placed 15 meters in the transition areas upstream and downstream of the hard point structures will minimize erosion from flows entering and exiting the reach. Erosion matting between the hard point structures will resist erosion of the bank until vegetation is established from the hydroseeding. See Figures 3.3.3.5 and 3.3.3.6.

In addition to the floodwall alignment, interior drainage facilities, adjacent to the left bank floodwall, have been added to allow runoff to flow into the Salsipuedes and Corralitos Creeks. Culverts will be added or modified near the end of the following streets: Dogwood Drive (2 added) and Highway 152 (2 added). See Figure 3.3.3.7.

b. Lands, Easements, Rights-of-Ways, Relocations, & Disposal. It is expected that only lands, easements, and right-of-ways associated with the portion of floodwall alignment that will be constructed on terrain where there is no existing levee and areas associated with interior drainage facilities (mostly underground culverts) will be required for acquisition. It is estimated that 3.4 acres and 7.7 acres will need to be permanently acquired for the right and left bank of the floodwall alignment, respectively. Temporary staging areas will also need to be secured and are 1.6 acres and 4.4 acres for the right and left banks, respectively.

Caltrans bridge stability analyses to date have determined that Highway 129 will have to be replaced or modified to withstand increased project flows.

3.3.3.2 Creek Floodwall (and/or Levee) Plan-Option B (1.8% Exp Ann Non-Exceed Prob)

a. General Plan Description. This plan option consists of concrete capped sheetpile floodwalls with an average wall height of 0.9-meters (2.7-feet). This plan option would provide a level of protection commensurate with an expected annual non-exceedance probability of 1.8% on Salsipuedes and Corralitos Creeks. The maximum wall height on the right bank is 2.1 meters at station 47+78 on the Corralitos Creek, just upstream from Highway 152. The maximum wall height on the left bank is 2.3 meters at station 55+17 on the Corralitos Creek, just downstream from Green Valley Road. The minimum wall height is 0.1 meters at

stations 18+39 and 27+35 for the right bank. The minimum wall height is also 0.1 meters at stations 23+32, 24+56, and 25+82 for the left bank.

The floodwall alignment, looking downstream, is approximately 5,913 linear meters (19,400-feet) on the right bank and 3,383 (11 ,100-feet) linear meters on the left bank. There are intermittent breaks in the alignment where the floodwall ties into high ground. Approximately 3,830 linear meters on the right bank and 2,600 linear meters on the left bank of the floodwall alignment will be constructed on top of an existing levee that was constructed in 1949 by the Corps. The remaining 1,770 linear meters on the right bank and 4,020 linear meters on the left bank will be constructed on terrain that consists primarily of agricultural lands, as well as some residential and commercial lands. See Figure 3.3.3.2.

The composition of the floodwall consists of sheet pile that is driven down into the crown of the existing levee and/or into the ground where there is no levee. A concrete cap with a width of 0.3 meters reinforces the floodwalls. An access road for the operation and maintenance (O&M) will constructed on the crown of the existing levee and on the ground adjacent to the floodwall where there is no levee. The O&M access road will be surfaced with an aggregate base course that is 0.15 meters thick. See figure 3.3.3.4.

Erosion control measures have been included into the plan and consist of four components: hard points, tiebacks, transitions, and hydroseeded erosion control matting. The hard points spaced at 15 meter intervals through out the erosive reach will reduce the water velocity along the bank so as a vegetated bank between the hard points will be able to resist the erosive flows of the river. The tieback structure upstream and downstream of the hard points will prevent flanking of the hard point structures by the river. The toe stones placed 15 meters in the transition areas upstream and downstream of the hard point structures will minimize erosion from flows entering and exiting the reach. Erosion matting between the hard point structures will resist erosion of the bank until vegetation is established from the hydroseeding. See Figures 3.3.3.5 and 3.3.3.6.

In addition to the floodwall alignment, interior drainage facilities, adjacent to the left bank floodwall, have been added to allow runoff to flow into the Salsipuedes and Corralitos Creeks. Culverts will be added or modified near the end of the following streets: Dogwood Drive (2 added) and Highway 152 (2 added). Channel widening will occur in the Salsipuedes and Corralitos Creek confluence area. See figure 3.3.3.7.

b. Lands, Easements, Rights-of-Ways, Relocations, & Disposal. It is expected that only lands, easements, and right-of-ways associated with the portion of floodwall alignment that will be constructed on terrain where there is no existing levee and areas associated with interior drainage facilities (mostly underground culverts) will be required for acquisition. It is estimated that 4.0 acres and 8.6 acres will need to be permanently acquired for the right and left bank of the

floodwall alignment, respectively. Temporary staging areas will also need to be secured and are 1.6 acres and 4.4 acres for the right and left banks, respectively.

Caltrans bridge stability analyses to date have determined that Highway 129 will have to be replaced or modified to withstand increased project flows.

3.3.3.3 Creek Floodwall (and/or Levee) Plan-Option C (1.4% Exp Ann Non-Exceed Prob)

a. General Plan Description. The plan option consists of concrete capped sheetpile floodwalls with an average wall height of 1 .O-meter. This plan option would provide a level of protection commensurate with an expected annual non-exceedance probability of 1.4% on Salsipuedes and Corralitos Creeks. The maximum wall height on the right bank is 2.3 meters at station 47+78 on the Corralitos Creek, just upstream from Highway 152. The maximum wall height on the left bank is 2.5 meters at station 55+17 on the Corralitos Creek, just downstream from Green Valley Road. The minimum wall height is 0.1 meters at stations 41+50 and 41+50 near Highway 152 for both the right and left banks, respectively.

The floodwall alignment, looking downstream, is approximately 6,553 linear meters (21,500-feet) on the right bank and 5,852 linear meters (19,200-feet) on the left bank. There are intermittent breaks in the alignment where it ties into high ground. Approximately 4,140 linear meters on the right bank and 2,830 linear meters on the left bank of the floodwall alignment will be constructed on top of an existing levee that was constructed in 1949 by the U.S. Army Corps of Engineers, San Francisco District (Corps). The remaining 1,800 linear meters on the right bank and 4,100 linear meters on the left bank will be constructed on terrain that consists primarily of agricultural lands, as well as some residential and commercial lands. The floodwall alignment for this plan option is presented in the attached Preliminary Plans & Profiles. See Figure 3.3.3.3.

The composition of the floodwall consists of sheet pile that is driven down into the crown of the existing levee and/or into the ground where there is no levee. A concrete cap with a width of 0.3 meters reinforces the floodwalls. An access road for the operation and maintenance (O&M) will constructed on the crown of the existing levee and on the ground adjacent to the floodwall where there is no levee. The O&M access road will be surfaced with an aggregate base course that is 0.15 meters thick. See Figures 3.3.3.4.

Erosion control measures have been included into the plan and consist of four components: hard points, tiebacks, transitions, and hydroseeded erosion control matting. The hard points spaced at 15 meter intervals through out the erosive reach will reduce the water velocity along the bank so as a vegetated bank between the hard points will be able to resist the erosive flows of the river. The tieback structure upstream and downstream of the hard points will prevent flanking of the hard point structures by the river. The toe stones placed 15 meters

in the transition areas upstream and downstream of the hard point structures will minimize erosion from flows entering and exiting the reach. Erosion matting between the hard point structures will resist erosion of the bank until vegetation is established from the hydroseeding. See Figures 3.3.3.5 and 3.3.3.6.

In addition to the floodwall alignment, interior drainage facilities, adjacent to the left bank floodwall, have been added to allow runoff to flow into the Salsipuedes and Corralitos Creeks. Culverts will be added or modified near the end of the following streets: Dogwood Drive (2 added) and Highway 152 (2 added). Channel widening will occur in the Salsipuedes and Corralitos Creek confluence area. See Figure 3.3.3.7.

A berm has also been proposed to control overflow from College Lake during the 1% annual probability event. The proposed berm for plan option-c would be approximately 2,200-feet long and would vary in height from 5- to 15-feet. The berm would have a crest width of 15-feet with side slopes of 1V on 2H. A 5-feet by lo-feet concrete box culvert would be the normal outlet for flows from College Lake. A 500-foot long spillway would be constructed to prevent the berm from being overtopped for flows in excess of the 1% annual probability event. The berm is shown in Figure 3.3.3.3 and in sheet 10 of the attached Preliminary Plans & Profiles.

b. Lands, Easements, Rights-of-Ways, Relocations, & Disposal. It is expected that only lands, easements, and right-of-ways associated with the portion of floodwall alignment that will be constructed on terrain where there is no existing levee and areas associated with interior drainage facilities (mostly underground culverts) will be required for acquisition. It is estimated that 5.0 acres and 11.9 acres will need to be permanently acquired for the right and left bank of the floodwall alignment, respectively. Temporary staging areas will also need to be secured and are 1.6 acres and 4.4 acres for the right and left banks, respectively.

Caltrans bridge stability analyses to date have determined that Highway 129 will have to be replaced or modified to withstand increased project flows.

3.3.3.4 Creek Floodwall (and/or Levee) Plan-Option D FEMA Certified (Ann Non-Exceed Prob ≥ 90% for 1% Ann Prob Event-loo-Year Event)

a. General Plan Description. Preliminary analyses of a creek floodwall plan option that meets FEMA criteria for certification has been accomplished. The economic benefit-to-cost analysis indicated that a FEMA plan option would cot be recommended for implementation. Consequently, further detailed evaluations have not been undertaken at this point. The following discussion presents a general description of the FEMA plan that was evaluated in preliminary analyses.

The FEMA plan option consists of concrete capped sheetpile floodwalls with an average wall height of 2.3-meters. This plan option would provide a FEMA

certified level of protection commensurate an annual non-exceedance probability that is greater than or equal to a 90% confidence level for the 1% annual probability event (100-year) on Salsipuedes and Corralitos Creeks. The maximum wall height on the right bank is 3.8 meters at station 47+78 on the Corralitos Creek, just upstream from Highway 152. The maximum wall height on the left bank is 4.0 meters at station 55+17 on the Corralitos Creek, just downstream from Green Valley Road. The minimum wall height on the right bank alignment is 0.1 meters at station 71+73 near Green Valley Road. The minimum wall height on the left bank alignment is 1.2 meters at station 62+94.

The composition of the floodwall consists of sheet pile that is driven down into the crown of the existing levee and/or into the ground where there is no levee. A concrete cap with a width of 0.3 meters reinforces the floodwalls. An access road for the operation and maintenance (O&M) will be constructed on the crown of the existing levee and on the ground adjacent to the floodwall where there is no levee. The O&M access road will be surfaced with an aggregate base course that is 0.15 meters thick. Typical cross-sections are presented in sheet 9 of the Preliminary Plans & Profiles. See Figure 3.3.3.4.

Erosion control measures have been included into the plan and consist of four components: hard points, tiebacks, transitions, and hydroseeded erosion control matting. The hard points spaced at 15 meter intervals through out the erosive reach will reduce the water velocity along the bank so as a vegetated bank between the hard points will be able to resist the erosive flows of the river. The tieback structure upstream and downstream of the hard points will prevent flanking of the hard point structures by the river. The toe stones placed 15 meters in the transition areas upstream and downstream of the hard point structures will minimize erosion from flows entering and exiting the reach. Erosion matting between the hard point structures will resist erosion of the bank until vegetation is established from the hydroseeding. See Figures 3.3.3.5 and 3.3.3.6.

The floodwall alignment is similar to floodwall plan-option c, but extends upstream, past Green Valley Road, 590 meters and 690 meters on the right and left bank alignments, respectively. Looking downstream, the alignment is approximately 6,530 linear meters (21,425-feet) on the right bank and 7,620 linear meters (25,000-feet) on the left bank. There are intermittent breaks in the alignment where it ties into high ground. Approximately 4,140 linear meters on the right bank and 2,830 linear meters on the left bank of the floodwall alignment will be constructed on top of an existing levee that was constructed in 1949 by the U.S. Army Corps of Engineers, San Francisco District (Corps). The remaining 2,390 linear meters on the right bank and 4,790 linear meters on the left bank will be constructed on terrain that consists primarily of agricultural lands, as well as some residential and commercial lands. A figure presenting the plan is currently unavailable.

In addition to the floodwall alignment, interior drainage facilities, adjacent to the left bank floodwall, have been added to allow runoff to flow into the Salsipuedes and Corralitos Creeks. Culverts will be added or modified near the end of the

Table 4.2.2-I (a)

PROVISIONAL

NED Benefit-to-Cost Analysis
Pajaro River GRR-Salsipuedes and Corralitos Creeks
January 1999

BENEFIT-TO-COST ITEMS	CRF @ 6.875%, 50-YR 0.07132	Floodwall Plan-Option A *4.7% Exp Ann Non-Exceed Prob 0.7m Avg Wall Height (2.3)*	Floodwall Plan-Option B *1.8% Exp Ann Non-Exceed Prob 0.9m Avg Wall Height (3.0)*
Project Construction Costs (incl. Environmental Mitigation)	$	5,097,000	$ 6,475,000
HWY Bridge Replacement (incl. Demolit, replace, and ramp costs)	$	3,484,000	$ 3,484,000
Planning, Engineering & Design-E&D during construction	$	1.433.000	$ 1,680,000
Construction Management Costs-S&A	$	879.000	$ 1,030,000
Real Estate Costs (ROWs and Easements; incl. conting.)	$	2,766,000	$ 3,334,000
Pre-construction Engineering & Design Study Costs-PED	$	2.000.000	$ 2,000,000
Total Project First Costs (incl. E&D, S&A, Env Mitigation & PED costs)	***$***	***15,659,000***	***$ 18,003,000***
Interest During Construction less PED costs (proj costs expended uniformly over 1 yr w/ ● qw ann costs expended at mid-yr @ 6.875%)	$	462,000	$ 541,000
Total Project Investment Costs less PED costs	$	14,121,000	$ 16,544,000
Equivalent Annual Project Costs (Capital Recovery Factor @ 6.875% over 50-years)	$	1.007.000	$ 1,180,000
Equivalent Annual O&M Costs (assumed 1% of Project Construction Costs)	$	51,000	$ 65.000
Total Equivalent Annual NED Costs (incl. /DC and O&M costs)	***$***	***1,058,000***	***$ 1,245,000***
Equivalent Annual NED Benefits	$	5,109,000	$ 7.000.000
less Equivalent Annual Damages (Induced Flooding)	$	(1.000)	$ (3,000)
Total Equivalent Annual NED Benefits	***$***	***5,108,000***	***$ 6,997,000***
Benefit-to-Cost Ratio		**4.6**	**5.6**
Net Equivalent Annual NED Benefits	**$**	**4,050,000**	**$ $752,000**
NON-FEDERAL SPONSOR COST SHARE ITEMS			
Non-Federal Sponsor Cash Requirement (5% of Project First Cost)	$	783,000	$ 900,000
HWY Bridge Replacement & Real Estate Costs (LERRDS)	$	*6,250,000*	$ *6,818,000*
Total Non-Federal Sponsor Cost	$	*7,033,000*	$ *7,718,000*
Non-Federal Cost Share % (must be at least 35% of project first cost; corps will reimburse difference if >50%)		44.913%	42.871%
(Corps Reimbursement) or Non-Federal Project Construction Cost Share	$	-	$
Non-Federal Sponsor's Net Cost	$	*7,033,000*	$ *9,002,000*

Table 4.2.2-I (b)

PROVISIONAL

NED Benefit-to-Cost Analysis
Pajaro River GRR-Salsipuedes and Conalitos Creeks
January 1999

BENEFIT-TO-COST ITEMS	0.0713 CRF @ 6.875%, 50-Yr	NED PLAN Floodwall Plan-Option C (w/ College L. Berm) 1.4% Exp Ann Non-Exceed Prob 1.0m Avg Wall Height (3.3')	FEMA PLAN Floodwall Plan-Option D (w/ College L. Berm) Ann Non-Exceed Prob ≥90% for 1% Ann Prob Event 2.3m Avg Wall Height (7.5')
Project Construction Costs (ind. Environmental Mitigation)	5	7,905,000	19,461,000
HWY Bridge Replacement (incl. Demolit, replace. end ramp costs)	$	3,484,000	3,484,000
Planning, Engineering & Design-E&D dunng construction	$	2.162.000	3,989,000
Construction Management Costs-S&A	$	1,326,000	2.446.000
Real Estate Costs (ROWs and Easements, incl. conting.)	$	5,664,000	8,591,000
Pre-construction Engineering & Design Study Costs-PED	$	3,000,000	3.250.000
Total Project First Costs (Incl. E&D, S&A, Env Mitigation & PED costs)	*$*	*23,541,000*	*41,221,000*
Interest During Construction less PED casts (proj costs expended uniformly over 1 yr w/ equiv ann costs expended at mid-yr @ 6.875%)	$	694,000	1,284,000
Total Project Investment Costs less PED costs	$	21,235,000	39,255,000
Equivalent Annual Project Costs (Capital Recovery Factor @ 6.875% over 50-years)	$	1,514,000	2,800,000
Equivalent Annual O&M Costs (assumed 1% of Project Construction Costs)	$	79.000	195.000
Total Equivalent Annual NED Costs (incl. IDC and O&M costs)	*$*	*1,593,000*	*2,995,000*
Equivalent Annual NED Benefits	$	7,397,000	7,940,000
less Equivalent Annual Damages (Induced Flooding)	$	(1,000)	(1,000)
Total Equivalent Annual NED Benefits	*$*	*7,396,000*	*7,939,000*
Benefit-to-Cost Ratio		**4.6**	**2.7**
Net Equivalent Annual NED Benefits	**$**	**5,803,000**	**4,944,000**
NON-FEDERAL SPONSOR COST SHARE ITEMS			
Non-Federal Sponsor Cash Requirement (5% of Pmject First Cost)	*$*	*1,177,000*	*2,061,000*
HWY Bridge Replacement & Real Estate Costs (LERRDS)	*$*	*9,148,000*	*12,075,000*
Total Non-Federal Sponsor Cost	*$*	*10,325,000*	*14,136,000*
Non-Federal Cost Share % (must be at least 15% of project first cost; corps will reimburse difference if >50%)		*43.860%*	**34.293%**
(Corps Reimbursement) or Non-Federal Project Construction Cost Share	*$*	-	**297,000**
Non-Federal Sponsor's Net Cost	*$*	*11,771,000*	*14,427,000*

Table 4.4.1-1(a)
System of Accounts Comparison
Pajaro River GRR-Salsipuedes Corralitos Creeks
January 1999

	Creek Floodwall (and/or Levee) Plan		
	Option A 4.7% Exp Ann Non-Exceed Prob (20-YR)	Option B 1.8% Exp Ann Non-Exceed Prob (50-YR)	option C 1.4% Exp Ann Non-Exceed Pmb (100-YR)
National Economic Development			
Total Project Investment Costs[1]	$ 14,121,000	$ 16,544,000	$ 21,235,000
Total Equivalent Annual Costs[2]	$ 1,058,000	$ 1,245,000	$ 1,593,000
Total Equivalent Annual NED Benefits	$ 5,108,000	$ 6,997,000	$ 7,396,000
Benefit-to-Cost Ratio	4.0	5.6	4.6
Net NED Benefits	$ 4,050,000	$ 5,752,000	$ 5,803,000
Environmental Quality			
Physical Environment	Temporary noise and air pollution during construction. 0.7-meter (2.3-feet) average height floodwall in place	Temporary noise and air pollution during construction. 0.9-meter (3.0-feet) average height floodwall in place.	Temporary noise and air pollution during construction. 1.0-meter (3.3-feet) average height floodwall in place.
Biological Environment	No long-term impacts on habitat Temporary impacts to wildlife disturbed during construction will be fully mitigated.	No tong-term impacts on habitat. Temporary impacts to wildlife disturbed during construction will be fully	No *long-term* impacts on habitat. Temporary impacts to wildlife disturbed during construction will be fully
Cultural Resources	No known cultural resources to be disturbed.	No known cultural resources to be disturbed.	No known cultural resources to be disturbed.
Regional Economic Development			
Local Government Finance	Santa Cruz County to provide non-Federal share of funds.	Santa Cruz County to provide non-Federal share of funds.	Santa Cruz County to pmvide non-Federal share of funds.
Economic Development	Additional employment and income during construction.	Some addional employment during construction.	Some addional employment during construction
Other Social Effects			
Urban and Community Impacts	No significant changes.	No significant changes.	No significant changes.
Life, Health and Safety	Lower risk of flood.	Lower risk of flood.	Lower risk of flood.

[1]Includes IDC costs, excludes sunk PED study costs

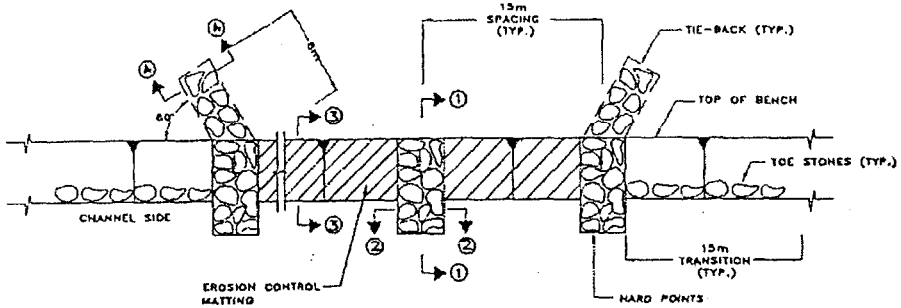
[2]Includes IDC costs and annual O costs, excludes sunk PED study Costs

Table 4.4.1-I (b)
System of Accounts Comparison
Pajaro River GRR-Salsipuedes Corralitos Creeks
January 1999

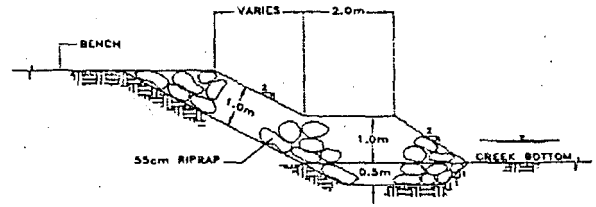
	Option D-FEMA Ann Non-Exceed Prob ≥ 90% for 1% Ann Prob Event (100-YR)	No-Action Plan
National Economic Development		
Total Project Investment Costs[1]	$ 41,221,000	No change fmm existing conditions.
Total Equivalent Annual Costs[2]	$ 2995.000	No change from existing conditions.
Total Equivalent Annual NED Benefits	$ 7,939,000	No change from existing conditions.
Benefit-to-Cost Ratio	2.7	No change fmm existing conditions.
Net NED Benefits	$ 4,944,000	No change from existing conditions.
Environmental Quality		
Physical Environment	Temporary noise and air pollution during construction. 2.3-meter (7.5feet) average height floodwall in place.	No change from existing conditions.
Biological Environment	No long-term impacts on habitat. Temporary impacts to wildlife disturbed during construction will be fully	No change from existing conditions.
Cultural Resources	No known cultural resources lo be disturbed,	No change from existing conditions.
Regional Economic Development		
Local Government Finance	Santa Cruz County to provide non-Federal share of funds.	No change from existing conditions.
Economic D e -	Some addional employment during construction.	No change from existing conditions.
Other Social Effects		
Urban and Community Impacts	No significant changes.	No change from existing conditions.
Life, Health and Safety	Lower risk of flood.	No change from existing conditions.

[1]Includes IDC costs excludes sunk PED study costs

[2]Includes IDC costs and annual O costs, excludes sunk PED study costs

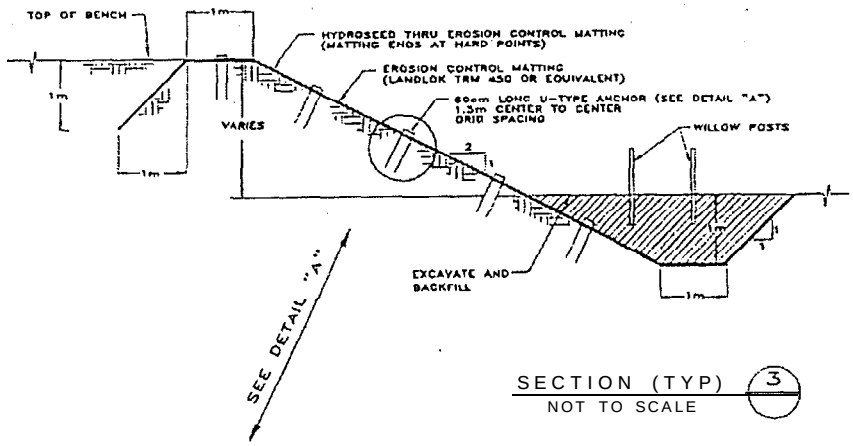


PLAN
NOT TO SCALE

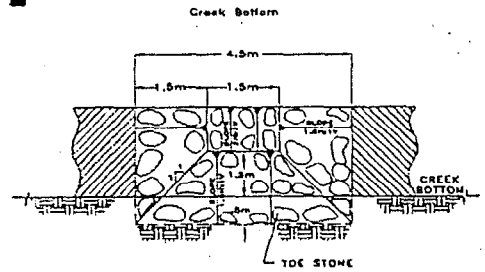


SECTION (TYP) 1
NOT TO SCALE

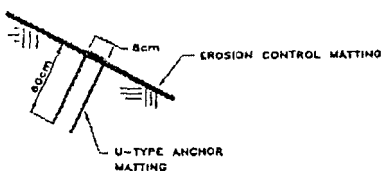
PRELIMINARY



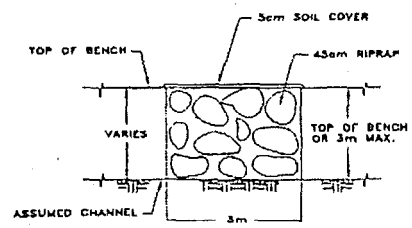
SECTION (TYP) 3
NOT TO SCALE



SECTION (TYP) 2
NOT TO SCALE

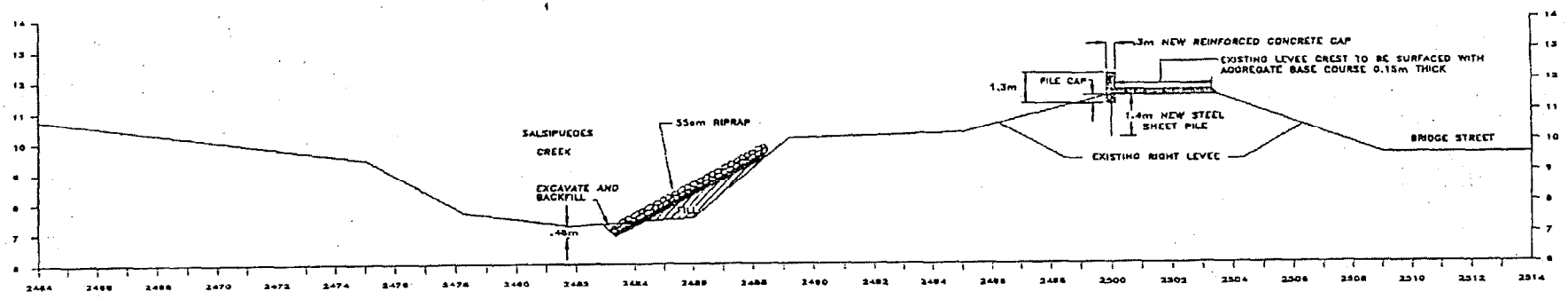


DETAIL "A"
U-TYPE ANCHOR (TYP.)
NOT TO SCALE



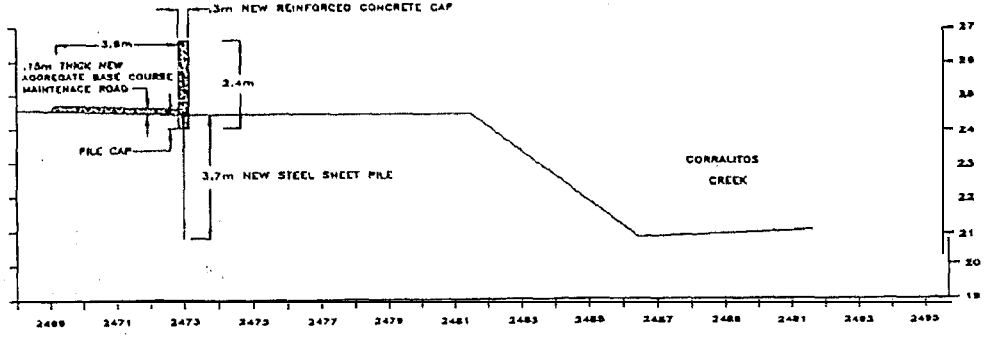
SECTION (TYP) 4
NOT TO SCALE

SANTA CRUZ & MONTEREY CO. CALIFORNIA
PAJARO RIVER
SALSIPUEDES AND CORRALITOS CREEKS
HARD POINTS
PLAN, DETAIL, SECTIONS 1, 2, 3, AND 4
23
PREPARED UNDER THE DIRECTION OF RICHARD B. THOMPSON
LT. COLONEL, CE, DISTRICT ENGINEER
DRAWN 12-12



TYPICAL SECTION

PRELIMINARY



TYPICAL SECTION

GRAPHIC SCALE

HORIZONTAL AND VERTICAL SCALE: 1cm = 60cm

PAJARO RIVER

SALSIPUEDES AND CORRALITOS CREEKS

TYPICAL SECTIONS

Figure 3.3.3.4

Pajaro River Flood Control

Background and Cost Summary

Brief History:

1936 Federal Flood Control Act authorizes preliminary study by Army Corps.
1949 Levee system construction is completed.
1955 First flood event to overtop levees.
1963 Interim Report identifies design deficiency.
1966 Federal Flood Control Act authorizes new project.
1974 Flood Control Alternatives Plan completed by Army Corps.
1975 Local farmers/residents speak out against proposed 100 year project.
1992 SCCFC&WCD Zone 7 is formed to generate maint. & local match funds.
1994 Army Corps Pajaro River Recon Study finds no + benefit mainstem project.
1995 Major flood event breaches levees; flows exceed design capacity
1995 Pajaro River Channel cleared above Highway 1
1997 Pajaro River levees resurfaced above Highway 1
1998 Most recent flood event
1998 Army Corps Gen Reevaluation Report finds 50 year mainstem proj cost effective
1999 GRR completed identifying Salsipuedes/Corralitos Creek project alternatives

Flood Protection Goal:

50 to 100 year level of flood capacity (0.2 to 0.1) recurrence interval

Current Capacity:

Pajaro River Mainstem: 22 to 25 year (4%) recurrence interval
Corralitos/Salsipuedes Creek System: Approx 8 year (12%) recurrence interval

Current Cost Estimates*:

Pajaro River Mainstem 50 Year Project:	$42 Million (Sec 216 Initial Appraisal)
Local/State Cost:	$2 1 Million
Pajaro River Mainstem 100 Year Project:	$100 Million (Current Guestimate)
Local/State Cost:	$50 Million
Corralitos/Salsipuedes Creek 50 Year Project:	$18 Million (General Reevaluation Report)
Local/State Cost:	$9 Million
Corralitos/Salsipuedes Creek 70 Year Project:	$24 Million (General Reevaluation Report)
Local/State Cost:	$12 Million
Corralitos/Salsipuedes Creek 100 year Project:	$4 1 Million (General Reevaluation Report)
Local/State Cost:	$14 Million

* Cost estimates based on standard 65/35 Army Corps cost share formula w/ local agency responsible for bridge replacement, offsite mitigation, land acquisition, etc.