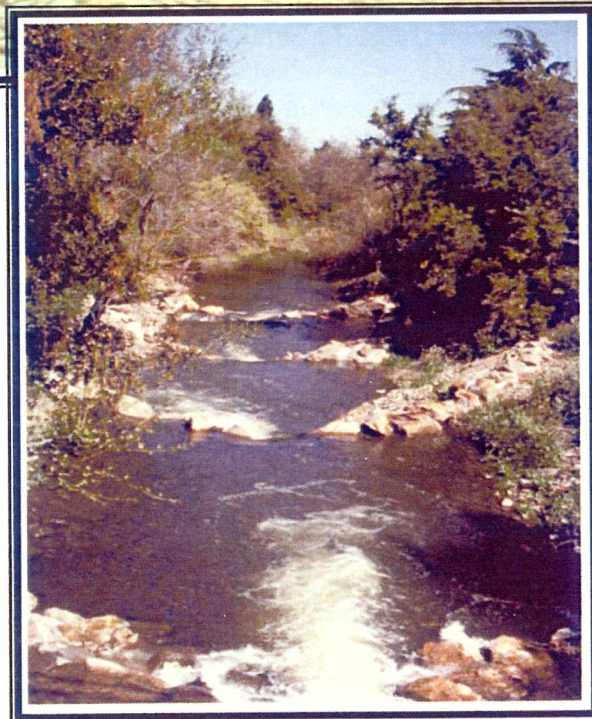


Limited Reevaluation Report:
Proposed Project Modifications

Upper Guadalupe River Project
San Jose, California



PROJECT MANAGEMENT
FILE COPY



US Army Corps
of Engineers
San Francisco District

FEBRUARY
2005

Santa Clara Valley
Water District



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List of Acronyms

ASA(CW) - Assistant Secretary of the Army for Civil Works
BCR - benefit-to-cost ratio
CAR - Coordination Act Report
CEQA - California Environmental Quality Act
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
Corps - U.S. Army Corps of Engineers
EIR/EIS - Environmental Impact Report/Environmental Impact Statement
EIS - Environmental Impact Statement
EOP - Environmental Operating Principles
ESA - The Endangered Species Act
ESU - Evolutionarily Significant Unit (a type of habitat definition)
FEMA - Flood Emergency Management Association
FWS - U.S. Fish and Wildlife Service
FY - Fiscal Year
GWIWG - Guadalupe Watershed Integration Working Group
HEP - Habitat Evaluation Procedures
LERRDS - lands, easements, rights-of-way, relocation, and disposal sites
LPP - Locally Preferred Plan
LRR - Limited Reevaluation Report
MOA - Memorandum of Agreement
NEPA - National Environmental Policy Act
NMFS - National Marine Fisheries Service
OMRR&R - operating, maintaining, replacing, repairing, and rehabilitating
PCA - Project Cooperation Agreements
PED - Project Engineering and Design
SCVWD - Santa Clara Valley Water Department
SIR - Supplemental Information Report
SRA - Shaded Riverine Aquatic cover (provides shade to river, critical in controlling water temperatures)
WRDA - Water Resources Development Act of 1986, as amended by Section 202 of Public Law 104-303, the Water Resources Development Act of 1996

UPPER GUADALUPE RIVER PROJECT LIMITED REEVALUATION REPORT

1. INTRODUCTION

1.1 Project Background

The Bypass Channel Plan, referred to herein as the authorized plan and locally preferred plan, was authorized by Congress in 1999 (Figure 2.1-1, *Project Authorization*) to provide protection to a portion of southwestern San Jose, California along the Upper Guadalupe River from flood events with an expected annual exceedance probability of about one percent (Figure 2.2.1-2, *Project Map*). However, the 1998 Upper Guadalupe Feasibility Report determined net NED benefits maximized with the less costly Valley View Plan, which would provide protection from flood events with an expected annual exceedance probability of about two percent. An exception to NED plan selection policy was granted because the authorized plan maximized total NED benefits (but not net NED benefits) and because the authorized plan reduced residual risk and provided 100 year protection to an urban area. However, an exception to NED cost sharing policy, which limits federal participation in a locally preferred plan (LPP) to the smaller federal share to construct the NED plan, was not granted. This was due to the finding that the proportionally large incremental cost to the Federal government to fully cost share the authorized plan was not considered to be a reasonable Federal investment.

Construction for the Upper Guadalupe River Project was originally scheduled to begin at the start of the first quarter of Fiscal Year (FY) 2002, with completion at the end of the fourth quarter of FY 2004. The project is currently in the Planning Engineering and Design (PED) phase. Subject to reauthorization that is required as a result of increased costs to the authorized project, construction is scheduled to begin in the first quarter FY 2005 and continue until the first quarter of FY 2014. The increased cost and construction period are primarily due consultation with regulatory agencies, which occurred shortly after the 1999 project authorization, as well as to inflation and increases in land values and construction price levels.

1.2 Purpose

The major purpose of this LRR is to support reauthorization of the project due to increases in cost. An additional purpose is to support the Project Cooperation Agreement (PCA)

Supporting information, such as several post authorization regulatory actions and new data affecting salmonid species in the project area, proposed modifications to the project, results of ongoing consultation with regulatory agencies, and updated cost allocation and apportionment is presented in the LRR.

The LRR will support decision-making by Congress, the U.S. Army Corps of Engineers (Corps), Santa Clara Valley Water District (SCVWD), who is serving as the non-Federal sponsor, and other responsible agencies, to implement the proposed project modifications and

ensure compliance with the National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), and other pertinent laws and regulations.

1.3 Scope

Modifications to the authorized project, which have resulted from new and improved information discovered during the PED phase are presented by the LRR and include an increase in the construction period (3.4.4 *Modification of Construction Schedule*), updates to the bridge removal and replacement plan (3.4.1 *Modifications to Bridge Replacement and Removal Plan*), minor updates to the mitigation plan (3.4.3 *Update of Mitigation Plan*), and several additional PED level design modifications (3.4.2 *Reach 9 Replacement of Gabion Features with Cribwall*). Chapter 5 presents the affects of modifications on environmental compliance.

Additionally, reevaluated costs and benefits and net benefits are calculated to ensure the project remains economically justified and a sound investment for the Federal Government.

Federal and non-Federal cost sharing for the project is also reestablished. In order to examine cost sharing under the original cost sharing prescription set forth by the 1998 Feasibility Report, the Valley View Plan has also been reevaluated and modified for environmental compliance. Associated costs and benefits are presented and compared to those of the authorized project.

The scope and content of the LRR, in combination with the 1998 Feasibility Report, contains the information needed to justify modification of the authorized project and support reauthorization of the authorized project as modified. This LRR, along with the 1998 Feasibility Report, a future Project Cooperation Agreement, and continued documentation of NEPA compliance will support implementation of the project.

1.4 Post-Authorization Environmental Policy Changes

In August 1996 the National Marine Fisheries Service (NMFS) proposed the Central California Coast Evolutionarily-Significant Unit of the steelhead trout *Oncorhynchus mykiss* for listing under the Endangered Species Act, and in August 1997 the listing was approved. After the steelhead listing was proposed, the San Francisco District immediately requested a Section 7 conference and made three subsequent written requests for formal Section 7 consultation prior to completion of the feasibility study. NMFS finally agreed to formal consultation in 1999, after completion of the Record of Decision for the planning Environmental Impact Statement (EIS). As a result of the status of steelhead trout, thermal impacts, and consultation with NMFS, the construction schedule for both the Valley View Plan and the authorized plan has been reevaluated. The Valley View Plan itself has also been significantly revised.

The primary reason for modification of the Valley View Plan is input from the National Marine Fisheries Service (received after the 1998 Feasibility Report and EIR/EIS) regarding acceptable project impacts on the steelhead trout. Formal Section 7 consultation on the authorized plan was completed after project authorization and established a 25-year construction schedule as a requirement for the project based on information available at the

time. Informal consultation on the Valley View Plan at that time resulted in a determination by NMFS that this plan would need to be substantially modified to be acceptable. Following is a chronology of consultation efforts with NMFS during that period and changes in applicable environmental regulations. Additional detail is found in the environmental appendix.

On April 5, 2000, the Corps received a letter (Enclosure E4, *April 2000 NMFS Letter*) from NMFS regarding potential temperature impacts resulting from the Upper Guadalupe River Project. The letter stated that neither the authorized project nor the Valley View Plan as it then existed would be acceptable to NMFS due to an accelerated construction schedule of six years recommended by the 1998 Feasibility Report. The letter stated the authorized plan was otherwise acceptable. The letter further noted that the Valley View Plan was inherently unacceptable due to the nature of the design which would cause large impacts on low-bank riparian habitat and shaded riverine aquatic (SRA) cover. The letter also emphasized the extreme sensitivity of the river's anadromous salmonid species to water temperature increases and habitat degradation. NMFS recommended the Corps modify the Valley View Plan to parallel the design of the authorized project, which had acceptable design features. The letter also stated that while NMFS could not endorse a construction period of less than 25 years without documentation that "trust resources would be adequately protected", a construction period of 20 years would most likely not appreciably worsen project impacts.

Revision of the design for the Valley View Plan and a lengthening of the construction schedule for both plans would reduce temperature impacts from construction. It would reduce losses of vegetation that shades the river (shaded riverine aquatic (SRA) cover) and allow SRA cover ample time to recover during phasing of construction. SRA cover is critical because it provides shade to the river and thereby controls water temperatures, in addition to providing important habitat features.

After 2000, additional institutional changes occurred in the environmental arena. Effective April 30, 2002, NMFS issued a rule to repeal critical habitat designation for 19 salmon and steelhead Evolutionarily Significant Units (ESU), including that which contained the Guadalupe Watershed. On September 29, 2003 NMFS permanently withdrew the critical habitat designation. Despite the repeal, the Upper Guadalupe River was recently designated as essential fish habitat for the chinook salmon under the Magnuson-Stevens Fishery Management Act, a designation that, along with the consultation from NMFS, affirms the need for the Upper Guadalupe River Project to mitigate temperature and SRA cover impacts which have a significant affect on salmonid fisheries.

NMFS affirmed in an August 20, 2003 letter to the Corps (Enclosure E5, *August 2003 NMFS Letter*) that impacts to salmon and steelhead would still have to be avoided, or, if impacts were unavoidable and limited, they would have to be mitigated for on-site. The letter also urges the Corps to "adopt a project alternative that avoids impacts or select an alternative that can enhance natural functions and improve self-sustaining physical and ecological processes on site."

As a result of this coordination, the Valley View Plan was revised according to NMFS criteria. The authorized plan did not require revision due to NMFS input, but the issue of the construction period needed resolution. New thermal modeling using updated tree growth rates

and revised vegetation mapping determined that the authorized plan (in its current design state) could be constructed in nine years with acceptable thermal impacts. NMFS has agreed in writing with this determination. Therefore, this LRR relies on a 9 year construction schedule for purposes of calculating current costs and benefits associated with the authorized plan and the Valley View Plan. When design for the authorized plan is finalized, temperature modeling will be run again to determine the appropriate construction schedule, and formal section 7 consultation will be completed.

1.5 Post-Authorization Agency and Citizen Collaboration and Resulting Objectives

The Corps and SCVWD have consulted with staff from various agencies, private citizens, and public interest groups regarding the current status of the Upper Guadalupe River Project and the proposed modifications presented by this LRR. These groups include the NMFS and the Guadalupe Watershed Integration Working Group (GWIWG), comprised of representatives from the United States Fish and Wildlife Service (FWS), National Oceanic and Atmospheric Administration (NOAA) Fisheries, California Department of Fish and Game, San Francisco Bay Regional Water Quality Control Board (RWQCB), City of San Jose, Natural Heritage Institute, Guadalupe Coyote Resource Conservation District, the Corps, and SCVWD. Coordination with various agencies, groups, and individuals have identified the following public and environmental priorities:

- Ensure conveyance consistency with the downstream Guadalupe River Project in downtown San Jose, a flood damage reduction project designed to protect against a one percent chance flood event. The Guadalupe River Project is currently essentially complete.
- Ensure that the modified project maintains one percent chance flood conveyance capacity as the authorized project intended for this urban area.
- Ensure that a secondary project objective of providing recreation is met by creating continuous recreational trails along the river that connect with other trails throughout the watershed.
- Attempt to provide all mitigation onsite.
- Replace the quality as well as the quantity of affected SRA cover.
- Limit potential adverse impacts on fish and wildlife habitat, with special emphasis on remnant steelhead trout and chinook salmon, using the opportunities associated with construction of the flood protection components.
- Minimize impacts to stream temperatures and mitigate unavoidable impacts.
- Keep the project and impact descriptions within the existing NEPA/CEQA documentation associated with the authorized project.

Since 2000, the Corps and SCVWD have investigated means to ensure these identified priorities will be met and remain consistent with the Federal Interest. The Corps and SCVWD, in coordination with environmental regulatory agencies and the GWIWG collaborative, have modified the Valley View Plan to minimize impacts on SRA cover and fisheries, and have updated the project mitigation plan. For the most part, the authorized plan was already considered to be aligned with public and environmental priorities.

1.6 Additional Environmental Protection Statutes and Requirements

NEPA requires the environmental consequences of a proposed action and project alternatives be considered before implementation of a Federal project. CEQA requires that environmental consequences of a proposed action and project alternatives be considered before approval, financing, or participation by the State of California.

This LRR includes information and documentation to certify requirements of NEPA, CEQA and other pertinent planning and environmental laws and regulations have been followed during modification of the authorized plan, and also in preparing the information contained within this LRR. Section 5.3 of this report presents the environmental laws and regulations that apply to the Upper Guadalupe River Project and the proposed modifications to the authorized project presented by this LRR.

1.7 Environmental Impact Report/Environmental Impact Statements

The original January 1998 Environmental Impact Report/Environmental Impact Statement (EIR/EIS), required by NEPA and CEQA, is available at <http://www.spn.usace.army.mil/guadalupe/>. The Record of Decision (ROD) for this EIR/EIS, dated June 1999, is available as Enclosure E5 to the LRR. Due to uncertainties about Federal funding and to cover additional work planned outside the scope of the Corps Project, SCVWD pursued its own regulatory EIR/EIS (on file with the San Francisco District), parallel with the Corps feasibility study. The draft was issued in 1996 and the final in 1999. The ROD for the 1999 EIR/EIS was signed in January 2004 after completion of water quality certification under Section 401 of the Clean Water Act. Minor changes to the authorized plan, as well as updated thermal information developed between 1998 and 2000, were also presented in the 2000 EIR/EIS.

The 1998 EIR/EIS is no longer up to date due to new thermal information and coordination, changes in the LPP, and major revision of the NED plan. The 2000 EIR/EIS remained largely valid and compliant for regulatory permitting of the Upper Guadalupe River Project, but needed supplementation due to new thermal information, a changed construction schedule, minor additional changes in the LPP, and so the Corps could use it as a basis for its own construction of the project. For these reasons, an environmental assessment (EA) was circulated in December 2004 and finalized in February 2005. This EA fully updates NEPA compliance for the project. Updated CEQA compliance will be handled separately by the SCVWD. All proposed design changes to the Authorized Project, with the exception of the increase in the duration of the construction schedule, are a result of typical PED level changes and such changes are not the result of post-authorization changes in environmental law or policy.

1.8 Funding Since Authorization

Currently, the Upper Guadalupe Project is in the Plans and Specifications Phase, with Pre-construction Engineering and Design (PED) taking place. Since authorization in 1999, PED funds in the amount of \$2,045,000 have been allocated for the Upper Guadalupe River Project. Total Fiscal Year (FY) funding allocations in 1999 were \$233,000. In FY 2000, total funding allocations were \$1,009,000; \$397,000 in FY 2001; \$117,000 in FY 2002; and \$289,000 in FY 2003.

1.9 Report Format and Summary of Contents

Due to the variety and the complexity of issues addressed by this Report, the LRR is divided into several portions, with information presented in a logical fashion. The executive summary and the summary of contents presented below provide a good starting point from which to gain a basic understanding of the issues presented by the LRR, as well as an orientation for navigating through the document.

Presentation of project authorization and the Authorized Project, also known as the Bypass Channel, occurs in Chapter 2. This chapter describes the Project and Plan exactly as presented in the 1998 Upper Guadalupe River Feasibility Report and the 1998 Chief of Engineers Report. Additional topics covered include the project authorization and presentation of original costs, benefits, and cost apportionment.

Chapter 3 presents currently proposed design modifications to the authorized plan, which are primarily PED level changes and the result of improved information discovered during the PED phase. Because the authorized plan was considered to be environmentally compliant, even after recent regulatory actions, which are discussed in detail in Chapter 5, design changes are relatively minor. Chapter 3 also discusses updates to the mitigation plan and due to informal and formal NMFS consultation, proposes an increase in the project construction period. Value Engineering requirements are also discussed in this chapter. Finally, this chapter presents cost estimates for the authorized plan with modification as well as 902 limit implications.

Chapter 4 presents the Valley View Plan including additional detail on post-authorization regulatory agency coordination and the need to reevaluate and modify this plan, as well as rationale for modifications. Costs for this updated plan are also presented.

Chapter 5 serves to present status and documentation of compliance with Environmental Laws and Regulation as the Upper Guadalupe River Project prepares for re-authorization, appropriation of funds, and construction. Chapter 5 also documents additional significant and relevant post-authorization regulatory actions.

Chapter 6 presents the reevaluated NED costs and benefits associated with the authorized and Valley View plans as modified by the LRR. An NED analysis of the current project is also presented.

Chapter 7 presents cost apportionment for the authorized plan with modification, based both on the 1998 Feasibility Study cost sharing prescription in which the Federal Government cost share is limited to Federal share to construct the valley View Plan, as well as the full federal participation in the authorized plan. This chapter also presents other important considerations when considering cost sharing and a discussion of exceptions to NED cost sharing policy.

Chapter 8 presents the views of the Corps' project partner, SCVWD, with regard to the findings and recommendations of this report, as well as project implementation.

Chapter 9 presents Corps recommendations for the Upper Guadalupe River Project as a result of the findings of this LRR.

The Appendices contain the full and complete technical reports covering Environmental issues, Hydrology and Hydraulics, Real Estate, and Economics. In addition, the section titled, *Enclosures*, contains important available correspondence regarding the Upper Guadalupe River Project.

2. PROJECT AUTHORIZATIONS AND AUTHORIZED PLAN DESCRIPTION

2.1 Original Project Authorization

Congress authorized the Upper Guadalupe River Project in 1999 per legislation contained in the Water Resources Development Act (WRDA) of 1999:

Section. 101 Project Authorizations.

(a) Projects with Chief's Reports.

The following projects for water resources development and conservation and other purposes are authorized to be carried out by the Secretary substantially in accordance with the plans, and subject to the conditions, described in the respective reports designated in this subsection:

(9) Upper Guadalupe River, California.

Construction of the locally preferred plan for the flood damage reduction and recreation, Upper Guadalupe River, California, described as the Bypass Channel Plan of the Chief of Engineers dated August 19, 1998, at a total cost of \$140,328,000, with an estimated Federal cost of \$44,000,000 and an estimated non-federal cost of \$96,328,000.

2.2 Description of Authorized Project

2.2.1 Location

The project is located in Santa Clara County, in west central California, immediately south of the San Francisco Bay. The project area is in the southwestern portion of the City of San Jose, within the highly urbanized Santa Clara Valley. (See Figure 2.1.1-1 Vicinity Map)

The Guadalupe River is the second largest stream in Santa Clara County. The river discharges into the San Francisco Bay approximately 20 miles north of its origin in the Santa Cruz Mountains. The Guadalupe drains an area of approximately 170 square miles. The lower watershed is primarily residential and commercial, and includes limited industrial and agricultural land, while the upper watershed is composed of mostly undeveloped land.

The project area (Figure 2.2.1-1, *Project Area Map*) includes approximately five and a half miles of the Upper Guadalupe River main stem between the Southern Pacific Railroad Bridge and the Blossom Hill Road Bridge. Two tributaries, which frequently overtop their banks, Ross Creek and Canoas Creek, are also included within the study area.

Figure 2.2.1-1 Vicinity Map

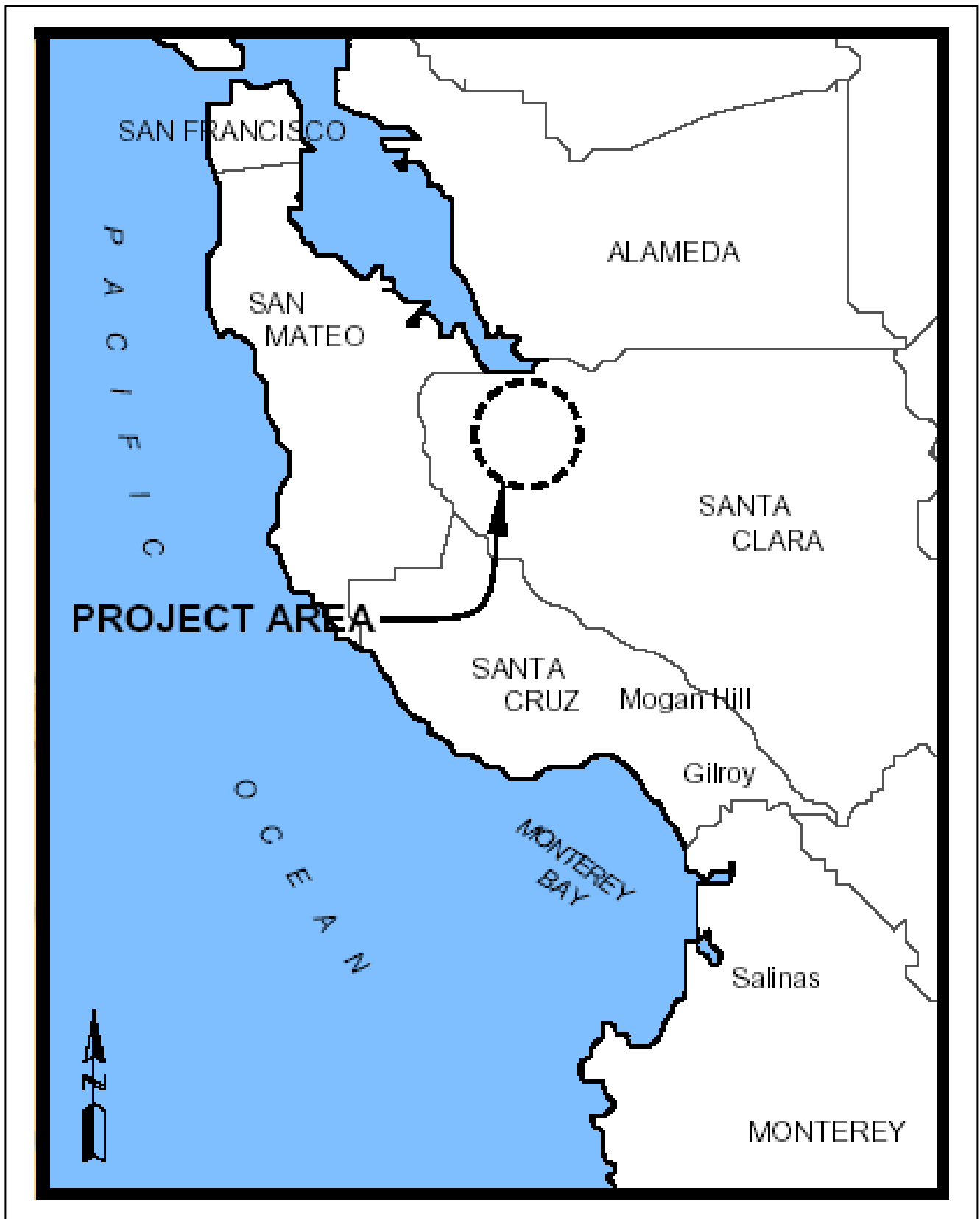
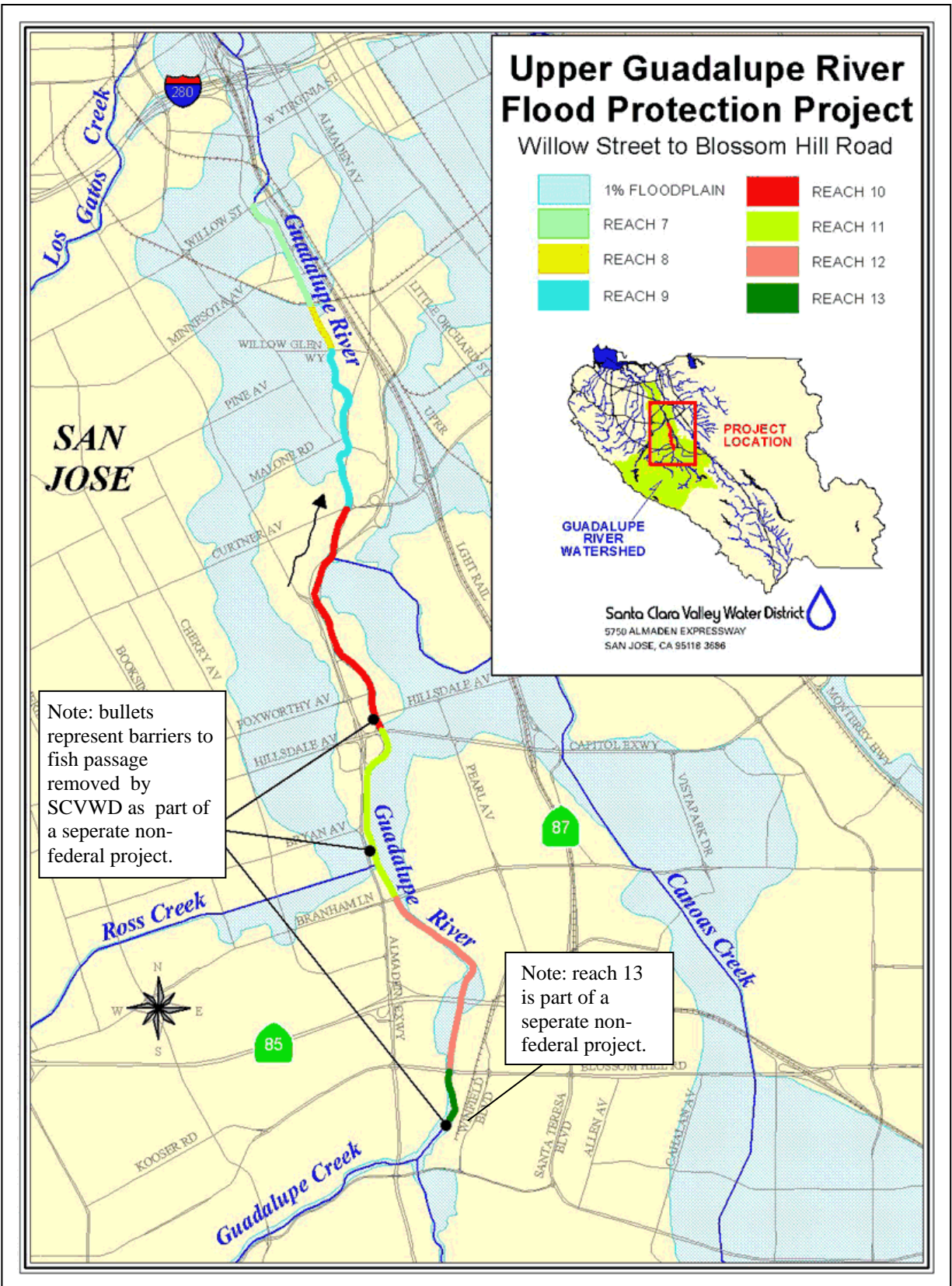


Figure 2.2.1-2 Project Area Map



Overall, approximately 7,500 commercial, industrial, and residential structures are located within the Flood Emergency Management Association's (FEMA) 100-year floodplain for the project area. The project channel reaches are shown in the following table.

Table 2.2.1-1 River Reaches (*Federal project only*)

RIVER REACH	LENGTH (FEET)	FROM	TO
7	4100	SPRR river crossing	UPRR river crossing
8	1600	UPRR river crossing	Willow Glen Way
9	4600	Willow Glen Way	Curtner Avenue
10	6600	Curtner Avenue	Capitol Expressway
11	3100	Capitol Expressway	Branham Lane
12	2600	Branham Lane	Blossom Hill Road

2.2.2 History of Flooding

Frequent flooding along the Guadalupe River has resulted in significant damages to the surrounding community and the city of San Jose. Recorded or known flood damages caused by the Guadalupe date back to the early 1800's. Previous channel modifications and erosion protection activities have extensively altered the river channel within the study area. In the late nineteenth century a landowner realigned the section between Willow Street and Willow Glen Way. Bridge crossings, erosion protection features, and adjacent developments have modified other channel reaches. Previous modifications have not significantly reduced flood damages. However, channel incision caused by changes in hydrology and sediment supply has probably provided greater channel capacity, though not enough to avoid major flood hazards.

Impacts and damages due to flooding have intensified since World War II, as the Valley's primary land use changed from agricultural to residential, commercial, and industrial. Fifteen significant floods have occurred since World War II. One of the most damaging floods in recent history occurred in January 1983, when the Guadalupe River inundated more than 60

acres between the Union Pacific Railroad and West Virginia Street. The Governor of California issued a State of Emergency Declaration for Santa Clara County, which was followed by a Declaration of Major Disaster for Public Assistance by the President of the United States. Damages for this 17-year event are estimated to have been on the order of several tens of millions of dollars. Were a 50 or 100-year event to occur in the absence of a flood damage reduction project, damages estimated during the 1998 Feasibility Study were \$152,300,000 and \$280,451,000 (both damages estimated in 1995 dollars), respectively.

2.2.3 Authorized Bypass Channel Plan (1998 Feasibility Report) Features

As reported in the 1998 Chief of Engineers Report, the authorized Bypass Channel Plan would provide flood protection against a flood event with an expected annual exceedance probability of about one percent by combining channel widening, bypass channels, flood walls, and five bridge replacements. The channel bank would be widened at intermittent locations along nearly two miles of the river. Three bypass channels would provide additional capacity along 1.5 miles of the river. Floodwalls, totaling approximately two-thirds of a mile in length, and varying in height from between two and four feet, would be built at various locations along the river. The Bypass Channel Plan would also increase the capacities of the downstream portions of two major tributaries, Ross Creek and Canoas Creek. The authorized plan also includes a recreation trail on the maintenance roads required for operation and maintenance of the flood control features. Mitigation for project construction would be achieved on project lands and include planting 20.9 acres of riparian forest, 4.1 acres of urban forest, and 0.9 acres of wetland habitat. The Bypass Channel Plan would include betterments associated with one of the bridge replacements.

2.2.4 Valley View Plan (1998 Feasibility Report) Features

As reported in the 1998 Chief of Engineers report, the Valley View Plan would provide protection against a flood event with an expected annual exceedance probability of about two percent by combining channel widening, flood walls, and four bridge replacements. The channel bank would be widened at intermittent locations along nearly two miles of river. Floodwalls, totaling approximately one-third of a mile in length and varying in height from between two and four feet, would be built at various locations along the river. Unlike the authorized Bypass Channel Plan, the Valley View Plan would not include any bypass channels or the recreation trail. The Valley View Plan would also increase the capacities of the downstream portions of two major tributaries, Ross Creek and Canoas Creek.

2.3 1998 Feasibility Report NED Analysis

As table 2.3-1 demonstrates, the Valley View Plan maximized net benefits in 1998 when the Feasibility Study was competed.

Table 2.3-1 NED Analysis, 1998 Feasibility Report
October 1997 Price Level, 7.125% Discount Rate, 50 year period of analysis
(Monetary Values in \$1,000's)

NED Category	1998 Bypass Plan (LPP)	1998 Valley View Plan
Average Annual Benefits	\$23,577	\$19,984
Average Annual Costs	\$11,455	\$7,344
Net Benefits	\$12,122	\$12,640
Benefit to Cost Ratio	2.1	2.7

2.4 Authorized Plan (LPP) Cost Sharing Prescription and Apportionment

As Table 2.3-1 indicates, net benefits maximized with the Valley View Plan at the time of the 1998 Feasibility Study. Total benefits, however, maximized with the authorized plan. Residual risk was also significantly reduced with the authorized Bypass Plan, which removed an additional 700 acres of land (54% more) and 4,560 additional structures (221% more) from the .01 probability event floodplain than the Valley View Plan. A partial exception to NED policy, therefore was granted and the LPP was recommended by the 1998 Chief's Report and authorized by Congress for construction. However the aspect of NED policy, which states the non-Federal sponsor, must pay the full cost difference between the plan that maximized net benefits and the LPP was not excepted. The 1998 Chief's Report stated that under existing policy, the Federal share of the cost of the recommended LPP would be limited to the Federal share of the cost of the NED Plan. Based on limiting the Federal share of the recommended LPP to the Federal share of the cost of the NED Plan, the non-Federal sponsor would be responsible for all incremental costs in excess of the NED Plan. Because recreation is a separate project purpose from flood control and its cost is shared equally by both project partners, 50% of the cost of recreation was added to the Federal share.

The WRDA 1999 project authorization relied on the cost estimate and cost sharing prescription set forth in the 1998 Chief's Report. The total project cost of \$140,328,000 was authorized, with an estimated Federal cost share of \$44,000,000 (31% of the total) and an estimated non-Federal share of \$96,328,000 (70 percent of the total). Table 2.4-1, *Cost Apportionment, 1998 Feasibility Report* demonstrates the 1998 breakdown of Federal and non-Federal cost estimates, by account, to construct the Valley View Plan and the LPP.

Table 2.4-1 Cost Apportionment, 1998 Feasibility Report
October 1997 Price Level (Monetary Values in \$1,000's)

Acct. No.	Item	Valley View		Authorized Plan (LPP)	
		FED.	NON-FED.	FED.	NON-FED.
01	Lands & Damages	-	30,666	-	50,033
02	Utility Relocations	-	8,491	-	14,685
06	Fish & Wildlife Facilities	1,700	-	3,100	-
14	Recreation Facilities	-	-	1,000	1,000
15 / 09	Floodway Contr. & Div. Str. / Channels and Canals	38,600	-	58,000	-
30	Engineering & Design	2,100	700	2,573	858
31	Supervision & Administration	777	419	901	485
Non-Federal 5% Cash Contribution		-4,176	4,176	-4,176	4,176
Adjustments (LPP Betterment)					58,000
Total Federal/Non-Federal Costs		44,000	38,760	44,000	96,000
Total Cost Share		54%	46%	31%	69%

3. RECOMMENDED MODIFICATION TO THE AUTHORIZED BYPASS PLAN

3.1 No Changes in Project Purpose, Scope and Location

There are no changes to the authorized project purpose of flood damage reduction or the location in southwestern San Jose as described in the 1998 Feasibility Report.

The original scope of the authorized flood damage reduction project was to provide 100-year flood protection. While there are some changes to the authorized project required for environmental compliance and PED level design updates, there are no changes in the original scope, as intended by the Chief's Report. The current Bypass Plan is consistent and in accordance with the scope of the authorized plan.

3.2 Changes in Local Cooperation Requirements

There are no changes in local cooperation requirements from the 1999 Chief's Report to the present. Section 221 of the Flood Control Act of 1970 (Public Law 91-611), as amended, provides that the construction of any water resources project by the Secretary of the Army shall not commence until each non-Federal interest has entered into a written agreement to furnish its required cooperation for the project. Project Cooperation Agreements (PCA) are legally binding agreements that set forth the terms of the relationship between the Federal Government and the local partners. A PCA is required for all authorized new construction projects and must be executed between the local partners and the office of the Assistant Secretary of the Army (Civil Works) prior to advertisement of the initial construction contract for the project. A PCA cannot be finalized until construction funds are appropriated.

3.3 Value Engineering

A Value Engineering study for the Authorized Bypass Plan was conducted in 2002. Recommendations from the study were considered and incorporated into the modified design (as presented in 3.4, *Specific Modifications to the Authorized Plan*) to the extent practicable. Due to the prolonged construction schedule, further value engineering will be conducted where feasible before final design and construction of various reaches of the project begin.

3.4 Specific Modifications to the Authorized Bypass Plan

Under Section 7 of the Endangered Species Act, the Corps made several attempts to initiate formal consultation with NMFS, but the Service delayed consultation until after completion of the 1998 Feasibility Report, Environmental Impact Statement, and Record of Decision. The project Biological Opinion, dated April 18, 2000, directed the Corps and SCVWD to construct the project over a 25-year period, rather than the three year

construction period proposed in the 1998 Upper Guadalupe River Project Feasibility Report. This requirement resulted from temperature modeling by the SCVWD, indicating a 6-year construction period would result in excessive impacts, but a 25-year construction period would not. The Corps has conducted additional temperature modeling studies to determine if a shorter, environmentally acceptable construction schedule, based on updated thermal information, was feasible.

In addition, several minor design modifications (which arose during the PED Phase as improved information was discovered and which are not the result of environmental consultation) have also been proposed and included for purposes of calculating the current cost estimate to construct the authorized plan. The first set of modifications were made between the 1998 feasibility report and the 1999 EIR/EIS. These changes include several minor realignments of and changes in project features including mitigation plantings. Subsequent modifications are minor and include several changes to bridge replacement and removal plans and the substituting gabions with cribwalls in several project reaches. There are currently no other design modifications to the project as it was proposed in the 1998 feasibility report, except minor modifications to mitigation acreage as a result of updated and improved information. There are no changes to the number or location of structures removed or relocated, or utility replacements and modifications. Table 3.4-1, *Engineering Modifications to the Authorized Plan* (following page), presents a comparison of the authorized Bypass Plan to the Bypass Plan with proposed modifications. Figure 3.4.4-1, *1998 Construction Schedule*, shown on page 3-7, presents the revised construction schedule.

3.4.1 Modifications to Bridge Replacement and Removal Plans

As Table 3.4.-1, *Engineering Modifications to Authorized Plan* illustrates, removal of the Hillsdale Avenue Bridge will no longer be part of the project as it has already been removed by the city.

3.4.2 Reach 9 Replacement of Gabion Features with Cribwall

During the PED phase it has been proposed that, where feasible, cribwall be substituted for gabions to provide bank stabilization. Geotechnical studies determined that gabions in some areas would need to be supplemented with soil nailing, making cribwall less expensive. Cribwall is now environmentally preferred in lower portions of the channel because fish can become caught in, or injured by, the wire baskets that are a part of gabions.

Table 3.4-1 Proposed Engineering Modifications to the Authorized Plan

PLAN	LOCATION	FLOOD CONTROL METHOD	ASSOCIATED ENGINEERING STRUCTURE/ CONSTRUCTION WORK	RATIONALE FOR ENGRNG STRUCTURE CHANGES	BRIDGE PLAN	RATIONALE FOR BRIDGE CHANGES
REACH 7						
Authorized Plan	East of River; east bank	Bypass Channel; bank lowering to create island berms; flood-wall	Stepped gabions in bypass channel; earthen lowered bank; excavation for floodwall		New Channel crossing bridge Willow St and Alma St.	
Auth. Plan w/ Mod.						
REACH 8						
Authorized Plan	East of River	Bypass channel	Stepped gabions; 190-foot weir drop structure downstream of Willow Glen Way			
Auth. Plan w/ Mod.			Same, except one maintenance ramp deleted.			
REACH 9						
Authorized Plan	East bank; east of River	Widening and benching; two 500-foot bypass channels.	Earthen widened bank; bypass stepped gabions and east bank cribwall and gabions,	Gabions were replaced with cribwall, because of cost considerations.	Modification to Malone Rd. Bridge, and replacement of Willow Glen Way and Curtner Ave. Bridges	
Auth. Plan w/ Mod.			Replace gabions with cribwall in lower part of reach.			
REACH 10B						
Authorized Plan	West bank; east bench	Levee construction, flood-wall, low-flow channel reconstruction	Earthen levee, excavation for floodwalls, reconstruct rock lined low-flow channel in a more natural form			
Auth. Plan w/ Mod.						

REACH 10C						
Authorized Plan	East bank	Widening and benching	Stepped gabions above maintenance road		Remove Hillsdale Ave. bridge. And modify Capitol Expressway Bridge	Hillsdale bridge already removed by City.
Auth. Plan w/ Mod.			Gabions are replaced with Cribwalls to reduce costs.		Modify Capitol Expressway Bridge	
REACH 11						
Authorized Plan	East and west banks	Widening; Bypass channel for 700 feet.	Gabions and cribwall			
Auth. Plan w/ Mod.		Bypass outlet realigned.				
REACH 12						
Authorized Plan	Both bank levees	Widening; reconstruct levees	Earthen embankment			
Auth. Plan w/ Mod.						
ROSS CREEK						
Authorized Plan	Both banks;	Channel widening; low flood - walls; new culverts under Almaden and Jarvis	Excavation along floodwalls; articulated concrete mat; concrete culvert			
Auth. Plan w/ Mod.						
CANOAS CREEK						
Authorized Plan	Both banks;	Low flood-walls; new culverts under Almaden and Nightingale	Excavation along floodwalls; concrete culvert			
Auth. Plan w/ Mod.						

3.4.3 Update of the Mitigation Plan

Mitigation for impacts to riparian forest, urban forest, shaded riverine aquatic (SRA) cover, and wetland habitats is planned for the authorized plan due to impacts on terrestrial and aquatic habitats. Mitigation for impacts to special status species is accomplished through general habitat mitigation and is not classified as mitigation specifically for sensitive species. Impacts to habitat values and compensation ratios for riparian forest impacts were determined by application of the Habitat Evaluation Procedures (HEP). The mitigation plan for the authorized plan is detailed in the 1998 planning EIR/EIS and the 2000 SCVWD Regulatory EIR/EIS.

The authorized plan mitigation plan (1998) includes:

- 1:1 replacement of urban forest and freshwater marsh lost as a result of project impacts
- 1.85:1 replacement of riparian forest, using riparian forest mitigation plantings plus minor additional incrementally-justified plantings, and
- 1:1 or better replacement of SRA cover (linear feet) needed to mitigate project impacts.

All habitat types are to be replaced in kind (with the same type of habitat), except for urban forests, which will be replaced with native oak-sycamore riparian forest. The mitigation plan for the authorized plan proposed 3.61 acres of urban forest, 21.16 acres of riparian forest, encompassing 10,111 linear feet of SRA cover, and 1.5 acres of freshwater marsh mitigation. All mitigation plantings were scheduled to occur during the first fall planting season after reach construction. The gain of shaded palustrine aquatic (SPA) habitat along the margin of the off-stream percolation ponds in reach 12 was not evaluated in the HEP and is not included in the mitigation plan because this cover type can not be used to offset losses in other cover types that were included in the HEP.

Subsequent changes to mitigation acreages are minor. The authorized plan, with modifications proposed by the LRR, has a slightly altered mitigation plan which requires 20.92 acres of riparian forest mitigation instead of the 21.16 acres originally required, and which provides for 13,193 linear feet of SRA cover mitigation to compensate for 4,748 linear feet of losses. The authorized plan with current modification also requires 0.9 acres of fresh water marsh mitigation, which is less than the 1.5 acres originally required to replace lost wetlands in the Federal portion of the project. It was determined during PED that a small portion of the riparian forest and wetland acreage in the authorized plan should be excluded from project mitigation because it was intended for mitigation banking by the SCVWD. This change of riparian forest mitigation acreage was largely offset with the determination during the PED phase that riparian forest impacts were slightly larger than previously estimated, thus requiring slightly more mitigation for this habitat type. Under this plan there are no new mitigation break points for the riparian forest and wetland mitigation, so the 1998 incremental analysis was not redone.

Table 3.4.3-1, *Mitigation Acreage for the authorized plan*, presents a summary of changes in riparian forest and wetland mitigation acreage for the authorized plan, as

presented in 1998 and as modified. There is no change to urban forest mitigation as presented in the 1998 Feasibility Report.

Table 3.4.3-1 Proposed Mitigation Acreage for Authorized Plan

1998 LPP RIPARIAN FOREST MITIGATION ACREAGE	2004 LPP RIPARIAN FOREST MITIGATION ACREAGE	AUTH. PLAN WETLAND MITIGATION ACREAGE	AUTH. PLAN W/ MOD. WETLAND MITIGATION ACREAGE	REASON FOR MITIGATION ACREAGE CHANGES	
REACH 7					
3.28	3.23			The decrease in mitigation acreage for riparian forest and wetlands is due to the exclusion of SCVWD mitigation banking acreage, partially offset by a small increase in riparian forest impacts discovered during PED.	
REACH 8					
0.13	0.13				
REACH 9					
1.84	1.81				
REACH 10					
5.53	6.0				
REACH 11					
4.23	5.31				
REACH 12					
6.15	4.44				
TOTAL ACRES					
21.16	20.92	1.5	0.9	.	

The Corps will use the Mitigation and Monitoring Plan (MMP) from the 2000 regulatory EIS. The MMP addresses compensatory mitigation and monitoring for terrestrial and aquatic resources that will be significantly affected by the authorized project. These include riparian and urban forest, SRA cover, undercut banks, wetlands, water temperatures, and habitat for anadromous fish (primarily steelhead trout). The MMP includes mitigation goals, descriptions of mitigation actions and methods, success criteria, and monitoring and adaptive management procedures. In addition, lessons learned from the neighboring downtown Guadalupe Flood Damage Reduction Project currently in construction will be studied and may be incorporated into the MMP as appropriate.

3.4.4 Modification of Construction Schedule

In order to reduce the temporary effect of construction on river temperatures and the associated adverse impacts to fish populations, the construction period will be increased from the three year duration presented in the 1998 Feasibility Report. Temperature modeling had not been completed at the time of the 1998 Feasibility Report and EIS/EIR, therefore, three years was used only as an estimate of the actual construction period. Upon additional consultation after the final feasibility report and associated EIS/EIR (when the final regulatory EIR/EIS came out NMFS concerns over construction period were already known) were complete, NMFS determined that the construction period was too short. Spreading construction over a longer time frame would significantly reduce the severity of short-term impacts on in-stream temperatures.

In 2003 the thermal model was updated to reflect the new information, including revised tree growth rates and project area tree growth in recent years. The Authorized Bypass Plan was modeled under a staggered nine year construction schedule. Construction would start in the third quarter of 2006, assuming the LRR and related PCA are approved and executed in a timely manner and funding is provided. Three graphs are included as attachments in order to present preliminary findings (E1, *Simulated March Water Temperature Before Major Mitigation Regrowth*; E2, *Simulated March Water Temperature After Mitigation Regrowth*; E3, *Habitat Suitability Units For Steelhead Trout Prior To, During, and After Construction and Mitigation*). Overall, modeling results show acceptable thermal impacts for a 9-year construction schedule that would remain within the regulatory EIR/EIS impact envelope. NMFS agreed with this determination in a letter dated January 7, 2004 [and in the supplemental BO]. Figure 3.4.4-1, *Current Construction Schedule*, documents the proposed construction period for the authorized plan.

Figure 3.4.4-1, Authorized Plan Construction Schedule

	Fiscal Year and Quarter																																			
	FY 06				FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13				FY 14			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Reach																																				
7																																				
8																																				
9																																				
10a																																				
10b																																				
10c																																				
11a																																				
11b																																				
11c																																				
12																																				
Ross																																				
Canoas																																				

3.5 Environmental Impacts of Modifications to the Authorized Bypass Plan

The environmental impacts of the proposed modifications to the Authorized plan are summarized in table 3.5-1, *Environmental Impacts of Modifications*.

Table 3.5-1 Environmental Impacts of Modifications to the Authorized Plan

AUTHORIZED PLAN MODIFICATION	ENVIRONMENTAL IMPACT
Bridge Removal and Replacement Plan	No impact because no extra bridges are constructed.
Replacement of Gabions with Cribwall in selected areas, Reach 9 and 10	This is primarily a cost saving modification that has no significant environmental impact. The preference for cribwalls only applies in stream channels, not in bypasses where it is implemented here.
Minor Changes in Impact Locations and Acreages	Between the 1998 Feasibility Report/planning EIS and the 2000 regulatory EIS the alignment of the authorized plan was slightly modified at various locations. The result is a small increase in riparian forest impacts documented in table 3.4.3-1
Mitigation Plan Update	1.52 acre (9% of total) decrease in total riparian forest mitigation due to exclusion of mitigation banking acreage, partially offset by minor increases in impacts as disclosed in 2000 Regulatory EIS.
Construction Schedule	Increase in construction schedule will reduce impact on stream temperatures from previous construction schedule.

3.6 Cost Estimate For Authorized Bypass Plan with Modification

Costs to construct the authorized Bypass Plan were reevaluated in order to determine the current estimated cost share to construct the project, whether the 902 limit of the authorized project is exceeded, and to ensure that the project remains economically justified. Costs were estimated in accordance with guidance contained by ER 1105-2-100, the Planning Guidance Notebook .

Table 3.6.2-1, *Authorized Plan Cost Allocation*, on the following page, presents the cost allocation for the authorized plan as reevaluated. The table also presents the 1998 authorized plan cost allocation, along with a summary of the reasons for cost increases by account.

Table 3.6.2-1 Authorized Bypass Plan Cost Allocation
*50 year period of analysis, October 1997 Price Level for 1998 Cost and
 October 2003 Price Level for 2004 Cost*

ACCOUNT	COST ALLOCATION CATEGORY	1998 COST	2004 COST	REASON FOR INCREASE
1	Lands and Damages	\$50,033,000	\$64,376,673	Real Estate prices have increased significantly in Santa Clara Valley between 1998 and 2004. Land in reach 12 was also rezoned from agricultural to industrial, which is more valuable.
2	Utility Relocations	\$14,685,000	\$24,413,723	Increase is partly due to the significant escalation of labor and construction costs in Santa Clara Valley between 1998 and 2004. The remainder of the increase is due to better and more accurate information that is now available to cost out these construction features
14	Recreation	\$2,000,000	\$2,296,117	Approx 15% increase due to escalation in price levels between 1998 and 2004
9 / 15	Floodway Control & Diversion Structures / Channels and Canals	\$58,000,000	\$94,597,287	Increase is partly due to the significant escalation of labor and construction costs in Santa Clara Valley between 1998 and 2004. The remainder of the increase is due to better and more accurate information that is now available to cost out these construction features
6	Fish & Wildlife Facilities	\$3,100,000	\$7,889,971	In addition to the increase in price levels, the increase is due to minor increases in riparian forest impacts discovered during PED
30	Pre-construction Engineering and Design	\$3,431,000	\$9,868,979	The original feasibility report PED underestimated the complexity of the design. too
31	Construction Management (S&A)	\$1,386,000	\$8,641,908	The major reason for the increase in cost is due to the fact that the project must now be managed over a 9 year period instead of a 3 year period as proposed in 1998.
	TOTAL COST*	\$132,635,000*	\$212,084,658	

Costs for the authorized Bypass Plan have increased by approximately \$72 million or 51 percent. This increase is not the result of modifications to the project, but is due to better information now available to cost out project features, as well as the dramatic increase in the cost of doing business in northern California, and especially the Santa Clara Valley region, between 1998 and 2004. Construction price levels and the value of real estate have all escalated significantly in the region between 1998 and 2004. An additional explanation of the changes in the cost estimates is simply due to the fact that more information is currently available today to estimate costs than was available in 1998. Design of the bypass plan has progressed to a greater level of detail since the feasibility level design available to estimate costs in 1998.

3.7 902 Limit Implications

Appendix G, Section III, entitled *Post Authorization Changes*, of the Planning Guidance Notebook (ER 1105-2-100), states that the maximum allowable project cost under the 902 limit includes the authorized cost (adjusted for inflation), the current cost of any studies, modifications, and action authorized by WRDA '86 or any later law, and 20 percent of the authorized cost (without adjustment for inflation). The authorized cost of the Upper Guadalupe River Project, adjusted for inflation, is \$172,783,000. Twenty percent of the authorized cost of \$140,328,000 equals \$28,066,000. Thus, the maximum allowable project cost under the 902 limit is \$200,849,000. Enclosure E2 presents the calculation sheet used to calculate the 902 limit.

Current cost estimates for the authorized plan exceed this limit. Therefore, the Upper Guadalupe River Project will require reauthorization by Congress.

4. RECOMMENDED MODIFICATION OF THE VALLEY VIEW PLAN

This chapter presents design modifications to the 1998 Valley View Plan as a result of resource agency consultation as well as reevaluated costs for the plan. Reevaluated costs establish the revised cost sharing requirements.

4.1 Feasibility Study Formulation of the 1998 Valley View Plan

During initial stages of the Feasibility study for the Upper Guadalupe River Project it was determined that none of the alternatives being examined in the study had a clear economic justification. Therefore, a new alternative, the Valley View Plan, was formulated in an attempt to find a relatively inexpensive and economically viable alternative. This plan was formulated to minimize costs while achieving substantial economic benefits. It provided protection against a 50-year flood based on available information at the time.

The 1998 Valley View Plan included channel widening in Reach 7 and portions of several upstream reaches, and floodwalls in Reach 8. Bypass channels were not included due to their higher real estate and construction costs. The widened channel was to have a bench set at three feet above the channel invert to reduce the width of the bench and associated real estate costs. Riparian forest would be planted on a strip on the bench next to the low-flow channel and on other non-forested areas to mitigate impacts. Minimization of real estate costs and construction costs determined which bank would be widened. Widening was proposed for only one side of the channel to reduce habitat impacts, but other actions to specifically avoid or reduce impacts were not proposed.

4.2 Impacts, Mitigation, and FWS Coordination of the 1998 Valley View Plan

The 1998 Valley View Plan would have smaller impacts on riparian forest than the authorized plan, with 6.5 acres removed in contrast to 10.46 acres under the authorized plan. No effort was made to avoid impacts to areas of higher-quality habitat so these losses were disproportionately of higher-quality habitat, relative to those under the authorized plan. Losses of over-water shade would be 4,034 feet, as opposed to 4,748 feet for the authorized plan, but impacts to undercut banks would be much higher at 2,535 feet vs. 1,100 feet for the authorized plan. Impacts in Reach 7 and portions of upstream reaches would be severe, with all riparian forest and SRA cover (including shade and undercut banks) being removed on one side of the river. However, there would be no impacts in Reach 9, a sensitive area with high-quality habitat that would have significant impacts under the authorized plan.

The District developed a draft mitigation plan for the 1998 Valley View Plan for evaluation along with the alternative itself under the Habitat Evaluation Procedures (HEP) study by the FWS. The revised draft Coordination Act Report (CAR) from the

FWS evaluated the Valley View Plan and the authorized plan and provided compensation ratios for both plans, for both terrestrial and aquatic impacts. The riparian forest compensation ratio for the Valley View Plan was higher than for the authorized plan due to the removal of substantially better habitat areas on average.

The mitigation plan for the Valley View Plan compensated for habitat impacts by providing substantial mitigation plantings to produce a long-term increase in habitat value, offsetting short-term losses. However, the FWS expressed concern in its CAR that the benches in this plan would be too low, relative to the low-flow channel invert, for any trees other than willows to grow in their mitigation areas. Since these mitigation areas would not support some of the same kinds of trees, such as cottonwoods, which would be removed by construction, riparian forest mitigation might not be fully in-kind. The FWS also expressed concern that the willows planted on this bench might not recreate the undercut banks, important for fish, lost during construction. Finally, the FWS noted that the large temporary losses of shade-producing vegetation resulting from this plan could negatively affect the small runs of anadromous fish on this river..

4.3 Coordination with the National Marine Fisheries Service

Efforts to coordinate the Valley View Plan and the authorized plan with the National Marine Fisheries Services (NMFS) began immediately after the proposed listing of the steelhead trout as threatened in August 1996. The District recognized that such a listing of this species under the Endangered Species Act could affect the project. However, NMFS delayed formal consultation until 1999, at which time it was conducted for the project's Section 404 permit. Table 4.3-1 shows the chronology of coordination efforts with NMFS.

Subsequently, the District and the SCVWD conferred and determined that the 1998 Valley View Plan likely would not be able to be implemented due to excessive water temperature impacts on anadromous fish. This plan would remove all shade on one bank of the river in Reach 7 and in a number of upstream locations due to channel widening and a low bench height relative to benches proposed in the authorized plan.

As a result of this decision, the District wrote a letter to NMFS on March 1, 2000, requesting a determination regarding the implementability of the Valley View Plan. NMFS responded in a letter dated April 5, 2000. Their letter indicated the Valley View Plan was not acceptable and might result in a jeopardy opinion if proposed for construction and considered under Section 7 consultation. NMFS based this determination on the nature and timing of the impacts from the Valley View Plan.

The use of channel widening instead of a bypass in Reach 7, and the low bench height in all widening locations, would have greatly increased impacts in those locations relative to impacts from the authorized plan at these same sites. While the authorized plan would have greater total impacts on riparian forest and overwater shade, NMFS was very concerned about the nature of the SRA cover impacts and the concentration of these impacts in Reach 7. The low bench height would have removed all trees from one bank and ensured the loss of all undercut banks and exposed roots on that bank; thus, SRA cover impacts would have been more severe on the average per linear foot.

Table 4.3-1 Chronology of NMFS coordination

Date	Action
Sept. 4, 1996	Letter to NMFS from the Environmental Planning Section requesting a Section 7 conference on the steelhead trout.
Feb. 1997	Draft EIR/EIS in support of the regulatory decision released to public.
June 5, 1997	Letter to NMFS with biological assessment from the Environmental Planning Section requesting formal consultation for the steelhead trout.
July 21, 1997	Letter from NMFS denying request for formal consultation.
Sept. 1997	Draft EIR/EIS for feasibility study released to public.
Oct. 15, 1997	Letter to NMFS from the district engineer requesting formal consultation for the steelhead trout for the SCVWD permit application. NMFS stated in response that consultation would be deferred.
Nov. 17, 1997	Letter from NMFS commenting on the Corps feasibility study draft EIR/EIS. Comments were general and procedural; no comments were made on the Valley View Plan.
Dec. 23, 1997	Letter to NMFS responding to the November 17 NMFS letter and requesting formal consultation for the authorized plan.
April 1998	Final EIR/EIS for feasibility study released for public.
Sept. 1998	New biological assessment with temperature modeling results submitted to NMFS by the Regulatory Branch. NMFS claimed project was still undefined and that formal consultation could not be started.
June 1, 1999	Record of Decision for feasibility EIR/EIS signed.
July 30, 1999	Meeting between NMFS, the SCVWD, and Regulatory Branch resolved some authorized plan project questions to the satisfaction of NMFS.
Sept. 23, 1999	Letter from the SCVWD to NMFS resolved remaining questions over the authorized plan to the satisfaction of NMFS.
March 1, 2000	Letter to NMFS requesting NMFS input on acceptability of the Valley View Plan.
April 5, 2000	Letter from NMFS stating that the Valley View Plan would not be acceptable and that the authorized plan would need a lengthy construction period

April 18, 2000	Biological Opinion on the authorized plan provided to the Corps by NMFS.
August 2000	Final EIR/EIS in support of the regulatory decision released.
January 12, 2001	Letter to NMFS from the Regulatory Branch listing conservation measures to be implemented under the Magnuson-Stevens Fishery Conservation and Management Act
March 3, 2003	Letter to NMFS from the Environmental Planning Section asking whether offsite mitigation would be acceptable for project impacts to steelhead trout along the upper Guadalupe River.
August 20, 2003	Response from NMFS indicating that offsite mitigation would not be acceptable for impacts to steelhead trout in the Guadalupe River.
January 7, 2004	Letter from NMFS indicating that the preliminary thermal modeling results for the modified authorized plan construction schedule (9 years) are acceptable to NMFS.
February 11, 2005	Supplemental biological opinion received.

NMFS was also concerned about the construction schedule for both alternatives, which would concentrate the impacts into a short period, meaning mitigation plantings would not have time to grow in advance of any of the habitat impacts. This would cause severe thermal impacts. NMFS, however, did not indicate their concern about a short construction period to Corps planning staff until after completion of the final Feasibility Report EIS and corresponding Record of Decision.

The April 5, 2000 NMFS letter further stated that an acceptable plan would need to use bypasses where the authorized plan used bypasses, and for reaches where widening was proposed, widen on the same side and at the same elevation as in the authorized plan, and use a lengthy construction schedule. These conditions were specified to minimize impacts on areas of better habitat and on water temperatures.

4.4 Revision of the Valley View Plan

The 1998 Feasibility Report had determined that the Valley View Plan, a plan offering a 50-year level of protection, would be the National Economic Development (NED) plan. The April 5, 2000 letter from NMFS indicated that the Valley View Plan was not acceptable for environmental reasons. Therefore, the District had to modify this plan to make it acceptable.

The authorized Bypass Plan had been significantly revised by the SCVWD prior to the feasibility report to avoid and reduce impacts as a result of extensive coordination with the resource agencies. With their modifications, this alternative had the support of these agencies despite significant environmental impacts. The feasibility report endorsed this design of the authorized plan as the most practical for a 100-year plan. Given the extensive work done to optimize the authorized plan, and the requirement by NMFS that

an acceptable plan would have to use the same basic channel modifications, basic hydraulic features (location-specific and bank-specific bypass channels, channel widening, and bench heights) as the authorized plan, its features were used as the basis for modifying the Valley View Plan to make it environmentally acceptable.

A bypass channel replaced channel widening in Reach 7 and floodwalls in Reach 8. Areas of upstream widening were changed to the same side of the channel as in the authorized plan in nearly all locations. Benches were raised to six to eight feet above the channel invert to reduce SRA cover impacts. Revised hydraulic information resulted in further modification of the Valley View Plan to include a major additional length of river channel widening to maintain the plan's 50-year level of protection. This increased impacts and mitigation needed for this alternative from those previously discussed, though the impacts and mitigation needed are still less than those required for the authorized plan.

Due to these changes, the Revised Valley View Plan now would have larger riparian forest habitat impacts than the original Valley View Plan. While it seems counterintuitive that a plan with smaller habitat impacts (in terms of acres) would be less environmentally acceptable than a plan with larger losses, several things need to be considered. First, the 1998 Valley View Plan would remove riparian forest right down to the edge of the river in all impact locations due to its three-foot bench height. This would cause a greater *intensity* of aquatic habitat impact per linear distance of SRA cover impact. NMFS was very concerned about loss of low-bank habitat features such as undercut banks; the 1998 Valley View Plan would cause the loss of over two and one half times as much undercut bank as the authorized plan. Undercut bank losses for the revised Valley View Plan would probably be similar to those for the authorized plan.

Second, the impact locations for the 1998 Valley View Plan were not selected to avoid areas of *high-quality riparian forest and SRA cover*, but actually removed many such areas that would be avoided by the Revised Valley View Plan and the authorized plan. Thus, impacts to habitat values are disproportionate relative to acres and linear feet of habitat impacted. This is reflected in the higher riparian forest compensation ratio determined by the HEP for the 1998 Valley View Plan. .

4.4.1 Modification Summary

Using NMFS coordination for guidance, environmentally unacceptable features of the Valley View Plan were removed and replaced with some of the desirable design features from the authorized plan, scaled down to offer protection from the two percent event. A bypass channel replaced channel widening in Reach 7 and floodwalls in Reach 8. In reaches where channel widening (at higher bench heights) was considered acceptable to regulatory agencies, benches were raised to six to eight feet. Where necessary, widening features were also moved to the same side of the channel as in the authorized plan in order to reduce impacts to SRA cover. The expanded construction schedule of nine years applied to the authorized Bypass Plan would also be applied to the 2004 Valley View Plan to reduce thermal impacts to the channel.

Updated cross-sections and hydraulic modeling completed during the PED phase determined the need for an additional length of channel modifications to be added to several widening, benching and cribwall features in reaches 9, 10C, and 11A in order to maintain protection from a two percent chance flood event. The need for additional length of features, in turn, increased environmental impacts and affected the mitigation plan.

In addition, geotechnical borings conducted during the PED phase indicate that bench mitigation areas in Reach 7 would not grow riparian forest due to adverse soil conditions. It was determined that soil replacement would not be feasible because it would wash away given water velocities in this reach. This doesn't make impacts larger, but means that the mitigation plan, utilizing plantings in reach 7, would not have worked as intended, thus requiring further revision.

Table 4.4.1-1, *Modifications to Valley View Plan*, below, compares the 1998 Valley View Plan to the 2004 Valley View Plan, and presents a summary of the need for modifications, most of which stem from environmental concerns.

The Revised Valley View Plan has been coordinated with the regulatory agencies through the GWIWG and the EA. Since this plan is essentially a scaled-down version of the authorized plan, with similar but lesser impacts, substantial comments differing from those directed at the authorized plan were not received or expected.

Table 4.4.1-1, Modifications to Valley View Plan

PLAN	LOCATION	FLOOD CONTROL METHOD	ENGINEERING FEATURE/ CONSTRUCTION WORK	REASON FOR CHANGES
REACH 7				
Valley View (1998)	East Bank	Widening and benching	Earthen embankment; replace Willow Street and Alma Street Bridges	Impacts to riparian forest and SRA cover due to widening and benching unacceptable in this reach. Therefore, use of a bypass channel to convey the 2% chance floor is the only feasible and environmentally acceptable feature.
Valley View (2004)	East of river: east bank	Bypass Channel; bank lowering to create island berms, floodwall	Stepped gabions in bypass channel; earthen lowered bank; excavation for floodwall and bypass	
REACH 8				
Valley View (1998)	East and West Banks	Floodwalls	Excavation	To avoid inducing interior drainage problems and provides small reduction in riparian forest impact.
Valley View (2004)	East and West Banks	Floodwalls and Bypass channel	Excavation and stepped gabions in bypass channel	

REACH 9				
Valley View (1998)	None	None	Replace Willow Glenn Way Bridge	New hydraulic information revealed that additional features were needed to convey the 50-year flows.
Valley View (2004)	East bank	Short bypass channel	Excavation and stepped gabions in bypass channel	

REACH 10A				
Valley View (1998)	East bank	Widening and benching	Earthen embankment	1998 Valley View Plan used bench heights of only 3 feet. This is not acceptable for retention of SRA cover. The 2004 design incorporates bench heights of 6-8 feet that allow for retention of some SRA cover.
Valley View (2004)		Same, except raise bench heights to 6-8 ft. from 3 ft.		

REACH 10B				
Valley View (1998)	None	None	None	
Valley View (2004)				

REACH 10C				
Valley View (1998)	East bank alternating to west bank, then both banks	Widening and benching	Earthen embankments replace Hillsdale Avenue Bridge	1998 Valley View Plan used bench heights of only 3 feet. This is not acceptable for retention of SRA cover. The 2004 design incorporates bench heights of 6-8 feet that allow for adequate SRA cover. Features were also moved to east bank to limit impacts to riparian forests and SRA cover.
Valley View (2004)	Moved entirely to east bank	Same, except raise bench heights to 6-8 ft. from 3 ft.		

REACH 11				
Valley View (1998)	East and west banks	Widening and benching.	Earthen embankments replace Hillsdale Avenue Bridge	Widening moved to west bank in some areas to limit impacts to riparian forests and SRA cover. Benches created by widening are also to be raised from original design to allow for adequate SRA cover.
Valley View (2004)	Some widening moved to west bank	Widening and benching		

REACH 12				
Valley View (1998)	None	None	None	
Valley View (2004)				

ROSS CREEK				
Valley View (1998)	Both banks	lower flood - walls; new culverts	Excavation along floodwalls; concrete culvert	
Valley View (2004)				
CANOAS CREEK				
Valley View (1998)	Both banks;	Lower flood- walls; new culverts	Excavation along floodwalls; concrete culvert	
Valley View (2004)				

4.4.2 Mitigation Plan Update

The mitigation plan for the 2004 Valley View Plan is derived from the modified mitigation plan of the authorized plan. Authorized Bypass Plan mitigation includes:

- 1:1 replacement of urban forest and freshwater marsh lost as a result of project impacts;
- 1.84:1 replacement of riparian forest, using riparian forest mitigation plantings, and;
- 1:1 replacement or better of SRA cover (linear feet) needed due to mitigate project impacts.

All habitat types are to be replaced in kind, except for urban forests, which will be replaced with native oak-sycamore riparian forest. A new HEP is not needed because the compensation ratio used for the authorized Bypass Plan can reasonably be applied to the 2004 Valley View Plan, given the great similarity in biological attributes of impact and mitigation areas under the two plans, and the fact that the impact and mitigation areas for the 2004 Valley View Plan are a subset of those for the authorized plan. This derivation is considered viable by the San Francisco District because the plans have similar channel modifications and biological characteristics of affected habitat. The FWS reviewed this assessment in their 2004 Planning Aid Report and had no objections.

The 2004 Valley View plan requires mitigation for an associated riparian forest loss of 8.04 acres. While the area of impact and mitigation needs has increased relative to the 1998 plan, the 2004 Valley View plan generally avoids areas of high-quality riparian forest and SRA cover, and locates riparian forest loss further from the river in order for the loss to have less impact on SRA cover. The 1998 Valley View plan needed to mitigate for an associated riparian forest loss of 6.5 acres. Modifications to the mitigation plan for impacts to riparian forests are illustrated by table 4.1.3-1, *Modification of the Valley View Mitigation Plan*.

In addition to riparian forest mitigation, the 2004 Valley View Plan also requires 0.51 acres of freshwater marsh wetland mitigation, as noted in the 1998 mitigation plan for the authorized Bypass Plan, which includes a one on one replacement of urban forest and freshwater marsh lost as a result of project impacts due to riparian forest and SRA cover plantings in Reach 10B. There is no difference in wetland impacts or mitigation between the 1998 plan and the 2004 plan.

There are no mitigation break points for the riparian forest and wetland mitigation under this plan so the 1998 incremental analysis was not redone.

Table 4.4.2-1, Riparian Forest Mitigation
(acres)

REACH	VALLEY VIEW (1998)	MODIFIED VALLEY VIEW (2004)
7	3.97	3.23
8	0.00	0.13
9	0.24	3.21
10	4.21	4.06
11	3.31	3.62
12	0.37	0.00
Total	12.10	14.25

4.5 Cost Allocation

Costs for the Valley View Plan have increased from \$83.5 million to \$165.6 million since 1998. Design modifications necessary to make this plan acceptable to the regulatory agencies and revised hydraulic information are the major reason for the substantial cost increases. Cost increases to the Valley View Plan are also due, in part, to inflation and escalation of price levels, construction costs, and real estate since 1998. Table 4.2-1, *Cost Allocation for the 1998 and 2004 Valley View Plan*, on the following page, presents the 1998 and 2004 Valley View Plan cost allocation, and a summary of reasoning for changes in cost beyond inflation and escalation of price levels.

Table 4.5-1, Cost Allocation for the Valley View Plan
*50 year period of analysis, October 1997 price level used for 1998 cost and
 October 2003 price level used for 2004 cost.*

ACCOUNT	COST ALLOCATION CATEGORY	1998 COST	2004 COST	REASON FOR INCREASE
1	Lands and Damages	\$30,666,000	\$36,834,201	Increase in land values as well as additional lands added to plan.
2	Utility Relocations	\$8,491,000	\$23,015,489	The goal of the 1998 Valley View plan was to reduce costs, including utility relocations. Modifications in order to meet hypothetical environmental compliance for this plan under current conditions mean that several costly utility relocations could no longer be avoided.
9 / 15	Floodway Control & Diversion Structures / Channels and Canals	\$38,600,000	\$78,188,397	In addition to escalation of construction price levels since 1998, this account increase due to replacement of more costly (yet environmentally acceptable) features such as the bypass channel in reach 7, and the current requirement to create higher bench heights when utilizing widening and benching features.
6	Fish & Wildlife Facilities	\$1,700,000	\$7,299,558	Updated hydraulic and geotechnical info resulted in need for more mitigation, as did new features of 2004 Valley View Plan. Cost estimates revised based on per-acre mitigation costs for other district projects.
30	Planning, Engineering, and Design	\$2,800,000	\$11,571,388	Costs are higher than for authorized plan, this is because the Corps needed to redesign Valley View Plan twice, first to meet NMFS objections and then in response to new hydraulic information. GWIWG process caused additional expenditures and delays. Additionally cost increases are due to the increased construction schedule length.
31	Construction Management (S&A)	\$1,196,000	\$8,641,908	Costs are the same as for the authorized plan, this is because even though this is slightly smaller project, same amount of supervision and over same period of time required. Additionally cost increases are due to the increased construction schedule length.
	TOTAL COST	\$ 83,453,000	\$ 165,550,941	

5. ENVIRONMENTAL COMPLIANCE AND DOCUMENTATION

5.1 Authorized Bypass Plan Compliance

5.1.1 EIR/EIS

As briefly addressed in Section 1.6, two sets of Environmental Impact Statements were prepared and circulated for the authorized project. One set was prepared in support of the feasibility report, with the final EIS being released in August 1998 and the Record of Decision (ROD) signed on June 1, 1999. The second set of EIS documents was prepared for the non-Federal sponsor's Section 404 permit, due to uncertainty over eventual Federal funding and the SCVWD's plan to construct additional features outside of the feasibility study boundaries. The final EIS supporting the regulatory action was released in 1999 and the ROD was signed in January 2004 after water quality certification under the Clean Water Act was granted.

Between the release of the final Feasibility study EIS and the final EIS supporting the regulatory decision, modest changes were made to the authorized Bypass Plan in several reaches, resulting in about 1.4 additional acres of riparian forest impact within the federal project area. The changes in the project which caused increased riparian impacts were several minor modifications such as a wider bypass outfall in Reach 11A and changes in bank excavation and maintenance road alignments in Reaches 11b and 11C. These changes in the project and its impacts were not reflected in the Feasibility study EIS but were disclosed in the EIS supporting the regulatory decision. The environmental assessment finalized in February 2005 incorporates the EIS supporting the regulatory decision and its ROD, by reference, to ensure Corps construction of this project is based upon the most up-to-date NEPA documents.

5.1.2 Construction Period

Another change in the project has been in its construction period. The Feasibility study EIR/EIS indicated that the authorized Bypass Plan would be constructed in three years, while the EIS supporting the regulatory decision indicated it would be constructed in 25 years. The 25-year schedule was included in the project description provided to NMFS through the Section 7 consultation for the SCVWD's Section 404 permit application and the 25-year schedule was also mandated by NMFS at the time of the BO.

The current nine-year construction schedule is bracketed within the proposed construction periods in these two NEPA documents, so a new analysis of impacts is not needed. Thermal modeling based on current design levels has verified that temporary impacts to water temperatures would be acceptable to migrating steelhead trout, and NMFS has concurred with this determination in a letter dated January 7, 2004 (Enclosure 4) and in the supplemental biological opinion.

5.1.3 Water Quality

The San Francisco Regional Water Quality Control Board (RWQCB) approved certification under Section 401 of the Clean Water Act on December 3, 2003, for construction of the project by the Corps and by the SCVWD. This certification contains 41 provisions that must be fulfilled. Due to the large number of provisions, many of which are routine procedural requirements such as preparation of a storm water pollution prevention plan and a spill prevention and response plan, only the more significant ones are listed below in Table 5.1-1. Included are a number of studies providing additional information to determine if minor project modifications would be appropriate, and to provide for better management of the Guadalupe River. With the exception of required studies, compliance with these provisions will occur after design for the authorized plan is complete and before construction.

Table 5.1-1, Major Water Quality Certification Requirements

REQUIREMENTS
Preparation and implementation of plans for impact avoidance and rectification such as the storm water pollution prevention plan
Construction limited to June 1 to October 31 unless advance approval received
Safe stockpiling of excavated material
Characterization of material to be excavated using standard protocols
Proper disposal of excavated material
Diversion of flows around construction sites
Investigation and corrective measures if fish harmed
Monitoring and reporting requirements
Revision of mitigation plan if mitigation does not meet criteria
Sediment supply and transport study
Profile and cross-section surveys to determine erosion and aggradation trends
Riparian planting soil suitability study
Project design modification study
Gravel augmentation study
Study temperature impacts from reaches upstream from the project
Bank armoring study- feasibility of biotechnical erosion control

5.1.4 Section 404(b)(1) Evaluation

The Section 404(b)(1) evaluation in the 2000 EIS supporting the regulatory decision evaluates the effects of the authorized plan and its compliance with Section 401 of the Clean Water Act and applicable regulations. For Corps projects, an equivalent evaluation is performed although a permit is not required.

The updated Valley View Plan is a version of the In-Stream Channel Modifications Alternative described in the EIS supporting the regulatory decision and thus passes the first stage screening evaluation. The second screening analysis was done based on project

purpose and provision of protection against the one percent flood, which has been determined by Congress in their authorization of the authorized Bypass Plan for construction. In this evaluation, the updated NED drops out because it does not meet the project purpose. The authorized plan remains as the least environmentally damaging practicable alternative as discussed in the Section 404(b)(1) analysis in the final EIS supporting the regulatory decision.

5.1.5 Biological Opinion

NMFS prepared a Biological Opinion (BO) dated April 18, 2000, including tentative conservation recommendations for essential fish habitat (EFH) under the Magnuson-Stevens Fishery Conservation and Management Act. The terms and conditions of the BO are listed in Table 5.1-2 on the following page. Formal Section 7 consultation was reopened with NMFS to cover the accelerated construction schedule and minor changes in the authorized plan and a supplemental BO was signed on February 4, 2005.

5.1.6 Coordination Act Report

The final Coordination Act Report prepared under the Fish and Wildlife Coordination Act assessed the impacts of the authorized Bypass Plan (1998). The authorized Bypass Plan (1998), the revised Valley View Plan, and the authorized Bypass Plan with modification have very similar locations and types of riparian forest and SRA cover impacts, so the 1998 compensation ratios from the authorized plan were used to determine mitigation needs for these updated plans. When the minor design refinements arising from the requirements of the water quality certification have been finalized, the Coordination Act Report will be updated to reflect all changes to the project.

It should also be noted that the U.S. Fish and Wildlife Service has been involved for the last two years in the GWIWG interagency coordination process and has continued to support the present design of the authorized plan, subject to minor and localized modifications to improve certain existing habitat areas.

5.2 Valley View Plan Compliance

Revision of the Valley View Plan was done to ensure it would be compliant with the Endangered Species Act if it were implemented. Because it was revised into a downsized version of the authorized plan, impacts would be similar to those of the authorized Bypass Plan, only smaller. This approach would also make the Revised Valley View Plan compliant with relevant laws were it to be implemented, subject to procedural requirements (e.g. Section 7 consultation, etc.), which would only be followed if the plan were actually proposed for implementation. However, procedural requirements such as Section 401 water quality certification (Clean Water Act), Section 106 consultation (National Historic Preservation Act), and Section 7 consultation (ESA) have been followed for the authorized plan, and the success of these procedural actions strongly suggest the Revised Valley View Plan, an alternative with similar but lesser impacts,

would be implementable. Table 5.3-1 on page 5-5 shows the status of environmental compliance efforts for the Upper Guadalupe River Flood Damage Reduction Project.

Table 5.1-2, Reasonable and Prudent Measures and Terms and Conditions, in the Biological Assessment

REASONABLE AND PRUDENT MEASURES	ASSOCIATED TERMS AND CONDITIONS
1. Avoid and minimize instream construction impacts to the Guadalupe River ecosystem.	Isolate each workspace from flowing water.
	Use existing points of ingress and egress, or work from top of bank, where practicable.
	Limit in-stream construction to period of April 15-October 15, with limitations before June 1.
	Ensure that construction in Ross and Canoas Creeks does not contribute sediment or turbidity to the Guadalupe River.
	Educate workers about the value of steelhead trout and their habitat.
2. Minimize temporary and permanent changes to instream and riparian habitat and ensure mitigation success.	Photo documentation prior to and after construction, and compilation of these photos into a reference library.
	Fully mitigate riparian forest and SRA cover losses on a 1:1 basis.
	Prepare mitigation and monitoring plan for NMFS review and approval.
	Implement a vegetation protection plan.
	Mitigation areas will not be affected by construction and will be protected in perpetuity.
3. Monitor construction and relocate steelhead using a fisheries biologist.	Retain fisheries biologist with appropriate expertise; biologist will monitor construction including temporary diversions.
	Fisheries biologist will capture and relocate steelhead trout to avoid impacts from construction.
	Monitor construction to avoid and rectify harmful conditions.
	Immediate notification of NMFS in case of steelhead injury or mortality.
4. Implement adequate measures to control sediment, turbidity, and pollutants resulting from construction.	Use erosion control and sediment detention devices.
	Prepare and implement a Storm Water Pollution Prevention Plan (SWPPP).
	Prepare and implement Toxic Material Control and Spill Response Plan.
	Water from site shall be removed from the site or placed in a settling basin prior to it being returned to the river.
	All materials used for construction shall be non-toxic.
5. Prepare and submit annual monitoring reports.	Provide written monitoring report within 30 days of completion of each construction season.
	Provide written reports regarding mitigation activities on the schedule indicated in the Mitigation and Monitoring Plan.
	Provide written reports on the results of the Vegetation Protection Plan on the schedule indicated in the plan.
	Submit all reports and plans to the appropriate NMFS official.

6. Ensure design improvement modifications for the project enhance natural stream functions and benefit anadromous salmonid habitat.	The Corps and SCVWD shall submit the reach-specific plans for the Design Improvement Modifications (as described in the Project's Water Quality Certification) at the 65 percent design level to NMFS for review and approval prior to initiation of construction.
	The 65 percent design plans for each reach of the Project shall be submitted to NMFS for review and approval.
7. Ensure fish passage improvement projects are properly designed for adult and juvenile steelhead migration.	The Corps and SCVWD shall submit the design plans for each fish passage improvement project to NMFS for review and approval prior to initiation of construction.
	The design plans for each fish passage improvement project shall be submitted to NMFS for review and approval.
8. Ensure flood bypasses are properly functioning and monitor for fish stranding.	The Corps and SCVWD shall perform visual surveys in each flood bypass channel during the first and second winter following its construction. Surveys for stranded fish and isolated pools shall be performed immediately after flood waters have receded from the bypass channel.
	The results of these surveys in the flood bypasses shall be submitted no later than June 1 of each year to NMFS.

5.3 Conclusions

Ongoing project and impacts coordination with the resource agencies through the Guadalupe Watershed Integration Working Group (GWIWG) indicates the agencies still support the Upper Guadalupe River Project subject to the requirements of the water quality certification. No new federal action is proposed that would create significant impacts on the human environment, including cumulative impacts, beyond those disclosed in the two final NEPA documents. Table 5.3-1 below presents current environmental compliance status with regard to relevant statutes.

Table 5.3-1 Environmental Compliance

Statute	Status
National Environmental Policy Act	EIS supporting the authorizing document Record of Decision signed June 1, 1999; EIS supporting the regulatory decision ROD signed Jan. 20, 2004. EA completed and FONSI signed Feb. 14, 2005 to consolidate the two previous EIS and to insure full public disclosure as required by NEPA.
Endangered Species Act	Formal Section 7 consultation completed. District council has determined the Biological Opinion applies to Corps construction of authorized plan. Consultation supports construction nine year construction schedule.
Clean Water Act	Section 401 certification completed December 2003. Section 404(b)(1) equivalency for authorized plan in EIR/EIS. Section 404(b)(1) equivalency supplement for Revised Valley View Plan in Section 6.0 of this appendix.
Clean Air Act	EIS determined authorized plan would conform with the most recent State Implementation Plan.
National Historic Preservation Act	Feasibility-level cultural resources coordination completed. Revised Valley View Plan footprint is entirely within footprint of feasibility study alternatives. Treatment plan and MOA will be prepared prior to construction.
Fish and Wildlife Coordination Act	Final Coordination Act Report (CAR) submitted August 1998 and updated by Planning Aid Report (PAR) in December 2003, providing adequate information for assessment of mitigation needs for Revised Valley View Plan and updated authorized plan.

Initiation and completion of construction, mitigation and operational activities currently depend on completion of several known environmental approvals, permits, or analyses. These include:

- Quality control certification by Corps.
- Treatment plan and a Memorandum of Agreement (MOA) will be prepared after final design prior to construction to ensure continued compliance with the National Historic Preservation Act.
- Adherence to Water Quality Certification Requirements, major requirements are cited in table 5.1-1,
- Update of CAR when the minor design refinements arising from the requirements of the water quality certification have been finalized.

These issues need not be resolved before the LRR is approved and the project is reauthorized. They will be addressed after design of the authorized plan is finalized and before construction commences.

6. NED BENEFITS AND COSTS

In compliance with guidance, economic benefits for the authorized plan were reevaluated and compared with reevaluated project costs to ensure the project remains economically justified and in the federal interest. Reevaluated net benefits for the 2004 modified authorized Bypass Plan are also compared with reevaluated net benefits of the 2004 Valley View Plan to determine the plan is also justified.

6.1 NED Benefits and Costs of Authorized Bypass Plan with Modification

NED benefits were developed in accordance with ER 1105-2-100, *Guidance for Conducting Civil Works Planning Studies* and EC 11-2-183, *Corps of Engineers Civil Works Direct Program - Program Development Guidance, Fiscal Year 2004*. Eight economic benefit categories were evaluated; inundation reduction benefits, savings in emergency costs, saving in flood insurance costs, saving in traffic-related costs, savings in current maintenance, advanced bridge replacement benefits, benefits accrued during project construction, and recreation benefits. While recreation benefits are calculated and presented, they are considered NED benefits but are not used to determine the plan that currently maximizes net benefits.

A detailed reanalysis of the inundation reduction benefits was performed using current available data and techniques (risk analysis using HEC-FDA modeling) and in accordance with current guidance; ER 1105-2-101, *Risk Analysis* and EM 1110-2-1619, *Risk Analysis for Flood Damage Reduction Studies*. Benefits associated with the savings in current maintenance costs make up less than one percent of total NED benefits, and were updated using the GDP Implicit Price Deflator index. Benefits for all other categories were calculated using current data.

Table 6.1-1, *NED Benefits and Costs of the Authorized Plan*, presents NED benefits associated with the authorized Bypass Plan in 1998 and 2004 and explains changes in benefits. 2004 benefits associated with the authorized Bypass Plan with modifications were calculated using a federal discount rate of 5.625% and a 50-year period of analysis. Monetary values for benefits of the authorized Bypass Plan with modification are expressed in October 2003 dollars. 1998 benefits of the authorized Bypass Plan are displayed as presented by the 1998 feasibility report, which used the prevailing discount rate of 7.25%, a 50-year period of analysis, and October 1997 price levels.

NED costs were developed in accordance with the same guidance as NED benefits. Table 6.1-1 also presents NED costs, average annual costs, traffic costs related to the project, and interest during construction (IDC). The sum of these NED costs as well as estimated annual O&M costs is equal to the Total average annual cost.

Table 6.1-1 NED Benefits and Costs of the Authorized Plan
October 1997 Price Level and 7.125% Discount Rate (1998 Analysis); October 2003 Price Level and 5.625% Discount Rate (2003 Analysis); 50 year period of analysis
(Monetary Values in \$1 000's)

NED ACCOUNT	Authorized Plan (1998)	Authorized Plan w/ Mod. (2004)	Reason For Difference
NED BENEFITS			
Inundation Reduction Benefits	20,411	18,777	Flood damage reduction model differences; revised depreciated replacement values of structures
Savings in Emergency Costs	328	526	Price level increases.
Savings in Traffic-Related Costs	179	279	Price level increases.
Benefits Accrued During Construction	1,671	1,236	Construction schedule differences; methodology modifications for computing benefits accrued during construction
Savings in Flood Insurance Costs	208	276	Price level increases.
Savings in Current Maintenance	210	219	Price level increases.
Adv. Bridge Replacement Ben.	570	102	Changes in number of bridges; changes in replacement costs
Total Average Annual NED Benefits	23,577	21,416	
NED COSTS			
Total Project First Costs (without recreation)	130,835	209,789	See Table 3.6.2-1
Traffic Delay/Detour Costs	2,699	1,726	Changes in number of bridges which were basis for determining re-routing and traffic delay/detour costs
Interest During Construction	18,359	65,596	Increased length of construction period from 3 years to 9 years
Total NED Costs	151,893	277,111	Combination of increased project costs and increased IDC (due to longer construction period)
Average Annual Costs	10,973	16,668	
Annual O&M Costs	482	577	Price level increases; additional O&M costs associated with MMP
Total Average Annual NED Costs	11,455	17,245	

Table 6.1-2, *Modified Authorized Bypass Plan Benefits and Costs, with Recreation*, presents recreation benefits, which are not considered NED benefits. It also shows that Recreation is justified on its own with a 12.64 Benefit to Cost Ratio (BCR). The Bypass Plan allows for a continuous recreation trail connecting to additional trails outside the project area, including a trail leading to downtown San Jose. The method of calculation is in accordance with Guidance ER 1105-2-100 and is the same as that used in 1998. Recreation benefits were derived using the *Unit Day Value* methodology to determine a unit day value per recreation user and the *Design Capacity Methodology* to estimate the total number of projected annual recreation uses. See also Table 6.3-1 where these BCRs are compared to others.

Table 6.1-2, Modified Authorized Bypass Plan Benefits and Costs, With Recreation
October 2003 Price Level and 5.625% Discount Rate, 50 year period of analysis
(Monetary Values in \$1,000's)

Benefit Category	Auth Plan w/ Modification
Average Annual NED Benefits	21,416
Average Annual Recreation Benefits	2,300
Average Annual Total Benefits	23,716
Average Annual NED Costs	17,245
Average Annual Recreation Costs	182
<i>Average Annual Total Costs</i>	17,427
Recreation only BCR	12.64

6.2 NED Benefits and Costs of the Valley View Plan with Modification

The NED benefit and cost categories were reevaluated and calculated for the Valley View Plan in the same manner as for the authorized plan. Recreation, however, is not a feature of the Valley View Plan. Therefore, there are no recreation benefits or costs.

Table 6.2-1, *NED Benefits and Costs of the Valley View Plan*, presents NED benefits and costs associated with the 1998 and 2004 Valley View Plans and explains changes in both.

Table 6.2-1, NED Benefits and Costs of the Valley View Plan
*October 1997 Price Level and 7.125% Discount Rate (1998 Analysis); October 2003
 Price Level and 5.625% Discount Rate (2003 Analysis); 50 year period of analysis
 (Monetary Values in \$1,000's)*

NED ACCOUNT	VALLEY VIEW (1998)	VALLEY VIEW W/ MOD. (2004)	REASON FOR DIFFERENCE
NED BENEFITS			
Inundation Reduction Benefits	17,343	16,775	Flood damage reduction model differences; revised depreciated replacement values of structures
Savings in Emergency Costs	293	476	Price level increases.
Savings in Traffic-Related Costs	136	233	Price level increases.
Benefits Accrued During Construction	1,671	1,236	Construction schedule differences; methodology modifications for computing benefits accrued during construction
Savings in Current Maintenance	126	88	Miscalculation in previous (1998) analysis which resulted in overstatement of benefits; price level increases
Adv. Bridge Replacement Benefits	350	69	Changes in number of bridges; changes in replacement costs
Total Average Annual Benefits	19,984	18,963	
NED COSTS			
Total Project First Costs	83,520	165,555 (rounded)	See table 4.5-1
Interest During Construction	11,533	44,805	Increased length of construction period from 3 years to 9 years
Traffic Delay/Detour Costs	2,613	1,620	Changes in number of bridges which were basis for determining re-routing and traffic delay/detour costs
Total NED Costs	97,666	211,976	Combination of increased project costs and increased IDC (due to longer construction period)
Average Annual NED Costs	7,123	12,750	
Annual O&M Costs	221	589	Project design changes; price level increases; additional O&M costs associated with the MMP
Total Average Annual Costs	7,344	13,339	

6.3 Net Benefits and NED Analysis

Federal policy directs the Corps to determine which plan maximizes the economic benefits of public investment in a project. The cost-effectiveness of public investment is measured by comparing average annual NED benefits and costs. The plan with the greatest net benefits is defined as the NED plan and is usually the plan recommended for construction. If a Locally Preferred Plan is more costly, but is still justified, that plan may be recommended for construction. However, the federal cost share to construct that plan is usually limited to the federal share to construct the less costly plan which maximizes net benefits. The 1998 feasibility report found that the Valley View plan maximized net benefits, yet the authorized Bypass Plan reduced the great amount of residual risk associated with the Valley View Plan. This resulted in the authorization of the Bypass Plan as the selected project in WRDA 1999, making the local sponsor responsible for paying 100 percent of the cost increase associated with the authorized plan.

Table 6.3-1, *Net NED Benefits for the Authorized and Valley View Plans*, presents net NED benefits for the 1998 and 2004 authorized Bypass and Valley View Plans. Comparison of net NED benefits demonstrates that in 2004, the Valley View Plan maximizes net benefits (average annual) over the authorized plan by \$1,453,000, Table 6.3-1 also demonstrates that the authorized plan remains economically justified with positive net benefits and a BCR of 1.24.

6.3-1, Net NED Benefits of the Authorized and Valley View Plans

October 1997 Price Level and 7.125% Discount Rate (1998 Analysis); October 2003 Price Level and 5.625% Discount Rate (2003 Analysis); 50 year period of analysis (Monetary Values in \$1,000's)

NED ACCOUNT	Valley View	Authorized Bypass Plan	Valley View with Modification	Authorized Bypass Plan with Modification
Average Annual NED Benefits	19,984	23,577	18,963	21,416
Average Annual NED Costs	7,344	11,455	13,339	17,245
Net Benefits	12,640	12,122	5,624	4,171
BCR	2.7	2.1	1.42	1.24

Table 6.3-2, *Net Benefits of the Authorized Plan, with Recreation*, demonstrates that when recreation benefits are factored, 2004 net benefits (average annual) actually maximize with the authorized Bypass Plan over the Valley View Plan by \$665,000. Policy guidance, however, has held that recreation benefits are not to be factored when

considering project formulation or designation of an NED Plan. As demonstrated in Table 6.3-2, the authorized Bypass Plan is economically justified without considering recreation benefits.

Table 6.3-2, Net Benefits of the Authorized Bypass Plan, with Recreation
October 1997 Price Level and 7.125% Discount Rate (1998 Analysis); October 2003 Price Level and 5.625% Discount Rate (2003 Analysis); 50 year period of analysis

NED ACCOUNT	Authorized Bypass Plan	Authorized Bypass Plan, with Modification
Average Annual Benefits	\$26,595,000	\$23,716,000
Average Annual Costs	\$11,602,000	\$17,427,000
Net Benefits	\$14,993,000	\$6,289,000
Benefit-to-Cost Ratio	2.3	1.36

7. COST APPORTIONMENT

The 1998 cost apportionment prescription states that the Valley View Plan, which maximized net NED benefits in 1998, set the basis for the federal cost share, with the local sponsor responsible for 100 percent of additional costs for the Locally Preferred Plan. While the findings of this limited reevaluation have determined that the Valley View Plan remains the plan that maximizes net benefits, conditions have arisen which could be taken into account when considering the appropriate cost apportionment that might be authorized to construct the Locally Preferred Plan.

Cost apportionment has been determined in a manner consistent with Corps policy and is based on the following: the cost of all project costs associated with flood damage reduction purposes are subject to a five-percent up-front cash contribution by SCVWD; SCVWD is then responsible for providing all lands, easements, rights-of-way, relocations (except existing railroad bridges and approaches thereto), referred to as LERRDs. Recreation is considered a separate project purpose, for which costs are shared equally by the Federal and non-Federal partner, in accordance with ER-1105-2-100.

Three different cost apportionment tables are presented on the following pages, all of which result in different cost sharing percentages between the Federal Government and the SCVWD. Table 7.1-1, *Valley View (2004) Cost Apportionment*, presents the Federal and non-Federal cost apportionment for the 2004 Valley View Plan. The Federal share presented in table 7.1-1 sets the limit (notwithstanding the addition of recreation costs) for the Federal share under the cost apportionment scenario presented in Table 7.2-1, *Authorized Bypass Plan (Modified) Cost Apportionment, Based on Authorized Cost Share Prescription*, which is based upon the assumptions set forth in the 1998 authorizing document. Table 7.2-2, *Authorized Bypass Plan Cost Apportionment, Based on Full Federal Participation* presents cost sharing based on full federal participation in the modified authorized Bypass Plan.

7.1 Valley View Plan with Modification

Because the Valley View Plan remains the plan that maximizes net benefits, cost apportionment for this plan must first be calculated if the cost sharing prescription recommended by the 1998 Feasibility Report is to be maintained. Since the sum of the cost of LERRDs and the sponsor's five-percent up-front contribution is between 35% and 50% of the total project cost, that sum represents the non-Federal cost share for this plan. The difference between the non-Federal share and total project costs also represent the Federal share for this plan, as well as that for flood control purposes associated with the authorized plan, if the 1998 cost sharing prescription is maintained. Table 7.1-1. below, illustrates that this Federal share is \$97,423,704.

Table 7.1-1 Cost Apportionment for the Valley View Plan, with Modification
Single Purpose Flood Control Project
October 2003 Price Levels

FIRST COST	FEDERAL	NON-FEDERAL
a. Lands and Damages		\$36,834,201
b. Utility Relocations		\$23,015,489
1. SUBTOTAL LERRDS		\$59,849,690
c. Floodway Control & Diversion Structures / Channels and Canals	\$78,188,397	
2. SUBTOTAL STREAM IMPROVEMENT	\$85,487,955	
e. Planning, Engineering, and Design (PED)	\$11,571,388	
f. Construction Management (S&A)	\$8,641,908	
3. SUBTOTAL PED AND CONSTRUCTION SERVICES	\$20,213,296	
g. Sponsor Cash Contribution (<i>5% Total Project Cost</i>)		\$8,277,547.05
h. Credit for Sponsor Cash Contribution	- 8,277,547.05	
TOTAL COST SHARE (1+2+3+G+H)	\$97,423,703.95	\$68,127,237.05
COST SHARE PERCENTAGE	59.8%	41.2%

7.2 Authorized Bypass Plan with Modification

Table 7.2-1 assumes the authorized cost sharing prescription and presents the cost share to construct the authorized Bypass Plan with modifications separated into flood control and recreation project purposes. The Federal share to construct the authorized plan under this scenario would be \$98,756,898.35. The non-Federal share would be \$113,327,786.65.

**Table 7.2-1 Authorized Bypass Plan (Modified) Cost Apportionment,
Based on Authorized Cost Share Prescription
October 2003 Price Levels**

PURPOSE	FIRST COST	FEDERAL	NON-FEDERAL
	1. SUBTOTAL: Recreation	\$ 1,333,167	\$ 1,333,167
RECREATION	a. Construction	1,148,059	1,148,059
	b. PED	98,690	98,690
	c. Construct Management (S&A)	86,419	86,419
	2. SUBTOTAL: LERRDS		\$ 88,790,396
FLOOD CONTROL	d. Lands and Damages		64,376,673
	e. Utility Relocations		24,413,723
	3.SUBTOTAL: CONSTRUCTION	\$ 120,627,927	
	f. Floodway Control & Diversion Structures / Channels & Canals	94,597,287	
	g. Fish & Wildlife Facilities	7,889,971	
	h. PED	9,671,599	
	i. Const. Management (S&A)	8,469,070	
	4. SUBTOTAL ADJUSTMENTS	-\$23,441,124	\$ 23,441,124
ADJUSTMENTS	j. Sponsor Cash Contribution (5% of 2 + 3)	- 10,470,916	\$ 10,470,916
	k. Betterment to cover additional cost to construct authorized plan over NED plan	- 12,970,208	\$ 12,970,208
	TOTAL COST (1+2+3+4)	\$ 98,756,898	\$ 113,327,786
	COST SHARE	46.5%	53.5%

Table 7.2-2 presents costs apportionment for the authorized plan based on full Federal cost sharing participation. The Federal share to construct the authorized plan under this scenario would be \$111,541,970.60. The non-Federal share would be \$ 100,542,687.40.

**Table 7.2-2 Authorized Bypass Plan (Modified) Cost Apportionment,
Based on Full Federal Participation
October 2003 Price Levels**

PURPOSE	FIRST COST	FEDERAL	NON-FEDERAL
	1. SUBTOTAL: Recreation	\$ 1,333,167	\$ 1,333,167
RECREATION	a. Construction	1,148,058	1148,058
	b. PED	98690	98690
	c. Construct Management (S&A)	86419	86419
	2. SUBTOTAL: LERRDS		\$ 88,790,396
FLOOD CONTROL	d. Lands and Damages		64,376,673
	e. Utility Relocations		24,413,723
	3.SUBTOTAL: CONSTRUCTION	\$120,627,927	
	f. Floodway Control & Diversion Structures / Channels & Canals	94,597,287	
	g. Fish & Wildlife Facilities	7,889,971	
	h. PED	9671599	
	i. Const. Management (S&A)	8469070	
ADJUSTMENTS	j. Sponsor Cash Contribution (5% of 2 + 3)	- 10,470,916	\$ 10,470,916
	TOTAL COST (1+2+3+j)	\$111,541,971	\$ 100,542,687
	COST SHARE	52.6%	47.4%

7.3 Other Considerations and Exception to NED Cost Sharing Policy

In 1998, the Assistant Secretary of the Army for Civil Works (ASA (CW)) granted an exception to NED plan selection to allow the Locally Preferred Plan to become the selected plan and ultimately, the authorized plan. Appendix E (E-130) of the Planning Notebook (ER 1105-2-100) states that non-Federal interests normally pay the incremental cost for all desired betterments. NED policy, with regard to locally preferred plans specifically, states that if the sponsor prefers a plan more costly than the NED plan, and the increased scope of the plan is not sufficient to warrant full Federal participation, ASA(CW) may grant an exception as long as the sponsor pays the difference in cost between those plans and the locally preferred plan.

A request by the SCVWD and the San Francisco District for an exception to this NED cost sharing policy, allowing the Federal Government to fully cost share in constructing the Locally Preferred Plan was denied before the release of the 1998 Final Feasibility Report because the increase in cost to the Federal Government under full participation was not considered reasonable.

The San Francisco District used the same rationale as required by ER-1105-2-100 for general deviations from NED, as well as several potentially overriding considerations, to formulate the argument to reconsider the discussion on the exception to NED cost sharing policy.

The San Francisco District believes that even though the authorized plan does not maximize NED benefits, the increased scope of the authorized plan must be considered in the determination of whether it reasonably maximizes net benefits and warrants full Federal participation.

7.3.1 Significantly Reduced Residual Risk and Increased Flood Protection

ER-1105-2-100 states that an essential element of the analysis of a recommended plan is identification of residual risk for the sponsor and the flood plain occupants, including residual damages and potential for loss of life due to exceedance of design capacity. As documented by the 1998 Feasibility Study, the Valley View Plan would remove 1,300 acres of land and 2,060 structures from the 100-year floodplain, leaving approximately 1,000 acres and over 5,400 structures (primarily residential) within the post-project floodplain. The authorized Bypass Plan, however, would greatly reduce residual risk, removing 2,000 acres and over three times as many structures (6,620) from the post-project 100-year floodplain.

An additional essential element in the analysis of the recommended plan for an urban area is the level of protection offered. Guidance states that when the NED Plan has a less than 90 percent reliability of protecting against the one percent chance annual flood event, an exception to the NED plan may be recommended. As indicated by the residual risk, the Valley View Plan would not provide reliable protection against the 100-year flood.

7.3.2 Watershed Approach and Consistency with Other Projects

While not necessarily a factor in determining Federal interest, consistency with additional projects in the river is a factor in taking a systematic and holistic approach to treatment of watershed resources. Consistency is also extremely important to the non-Federal sponsor and the local community, who demand the Water District provide a level of protection comparable to that offered by neighboring projects. Currently, the Corps is constructing a 100-year Guadalupe River Flood Damage Reduction Project in downtown San Jose, immediately downstream of the Upper Guadalupe River Project area. Constructing a 100-year project for the Upper Guadalupe Project would result in consistency of hydraulic conditions between the two reaches of the river. This would also facilitate the Corps' commitment to manage the series of projects to minimize cumulative adverse impacts

and optimize beneficial environmental, hydrological, and other effects through effective management techniques.

7.3.3 Recreation

Recreation trails are incorporated into levee and maintenance road features of the authorized plan. While they can be included for a very small added cost, expected economic benefits are very high. Average annual recreation costs of \$182,000 add an extra to the \$2,300,000 annual benefits. In fact recreation benefits associated with the authorized Bypass Plan are so great, that if they were considered in the NED optimization, the authorized plan would maximize net benefits (\$6,289,000 net benefits would be associated with the authorized Bypass Plan and \$5,624,000 with the Valley View Plan).

Recreation, inherently, cannot be added as a viable component to the Valley View Plan because project lands associated with this plan are not continuous through the project area. The majority of the value derived from recreational trails associated with the authorized plan is their connectivity throughout the project area and the ability to link with other heavily used trails continuing throughout the San Jose and Santa Clara Valley region. It is expected that trails along the Upper Guadalupe River Project would be heavily used by commuters on their way to downtown San Jose as well as recreational users.

In addition, recreational trails would be a very valuable asset in bringing the community closer to the river and providing environmental public education. Many local and State efforts are underway to restore salmonid migratory runs through the river (including Corps efforts within the Upper Guadalupe Project area) to former proportions. Recreation trails would provide a unique opportunity for the public to witness and experience the expected success of these projects.

7.3.4 Limited Additional Investment Required By the Federal Government to Fully Participate in the Authorized Plan

While total project costs for the authorized plan are \$46,533,717 greater than Valley View, the additional cost to the Federal government under full participation in the authorized plan would be \$12,785,072. The larger portion of the increment would be borne by the local sponsor because of the considerable increase in the cost of LERRDs associated with the authorized Bypass Plan over those with the Valley View Plan.

7.3.5 Exception to NED Cost Share Policy

From the standpoint of the Federal Government, whether considerations other than NED afforded by the authorized Bypass Plan outweigh the fact that the Valley View Plan has greater net NED benefits, and are worth the greater investment, is difficult to assess. In consideration of non-NED factors and benefits, the greatly reduced residual risk afforded, the limited additional investment required by the Federal government, and the reduced difference in Federal cost between the two plans however, it appears that Federal participation in the Locally Preferred Plan would be justified.

Corps policy states that the non-Federal sponsor will typically pay the difference in the cost between the plan that maximizes net NED benefits and the Locally Preferred Plan. Exceptions to this Corps policy are usually granted if the Locally Preferred Plan is smaller than the NED plan.

In the case with the Upper Guadalupe River Project, where the Locally Preferred Plan is larger in scope and cost than the NED Plan, an exception to this Corps policy is requested for the Federal government to fully cost share in constructing the LPP. An exception was also requested in 1997 prior to release of the 1998 Upper Guadalupe Final Feasibility Study. The following criteria as well as the fact that the larger LPP plan provides 100-year flood protection to an urban area were created to attempt to justify the exception and it was argued that all of these criteria were met:

- (1) implementation of the 100-year plan reduces the overall risk from flooding to the urban area; *(4,560 more structures remain in the .01 probability event floodplain under implementation of the NED Valley View plan over the Locally Preferred Bypass Channel Plan)*
- (2) implementation of the NED plan would leave significant portions of an urban area within the post-project floodplain; *(700 additional acres of land)*
- (3) the incremental costs are not unreasonable;
- (4) the 100-year protection will reduce non-Federal eligibility requirements for the National Flood Insurance Program;
- (5) the 100-year protection has the potential to reduce future net subsidized reimbursements for flood losses, both insured and uninsured (e.g. disaster relief);
- (6) the 100-year protection significantly changes the local planning environment.

An exception was granted to allow the Federal Government to participate in constructing the Locally Preferred Plan. However, the exemption request for the Federal government to fully cost share in construction was not granted, and the Federal share was limited at the much smaller amount of constructing the plan determined to be the NED plan.

This exemption request for full Federal participation was denied primarily due to the large increase in cost share that would be required by the Federal government to fully cost share the Locally Preferred Plan. The Federal government share to construct the Valley View Plan was \$44 million. To fully cost share the Locally Preferred Plan, the Federal share would have increased by approximately 60 percent, or \$26 million, to a total of \$70 million. It was deemed that the above criteria (2), the incremental costs are not unreasonable, was not fully met to the extent that it was reasonable for the Federal government to pay the large extra increment to fully cost share the Locally Preferred Plan. Fully participating in the Locally Preferred Plan did not, at the time, maximize the return on the Federal dollar.

The current incremental cost to the Federal government to fully cost share the Locally Preferred Plan is \$12.8 million, a 13 percent increase over the Federal share to construct the Valley View Plan. As a result of changed conditions, the incremental cost to the Federal government has been greatly reduced and now appears reasonable. Additional NED policy exception requirements as stated above are met, as in 1998.

A very significant benefit of the 13 percent incremental cost (\$12.8 million) of the Locally Preferred Plan is the drastic reduction of residual risk to the Nation. The 13% incremental cost affords the removal of 221% or 4,560 more structures from the .01 probability even flood plain and an additional 700 acres of land.

8.0 VIEWS OF THE NON-FEDERAL SPONSOR

SCVWD believes that the Valley View Plan, which offers 50-year flood protection, is unacceptable. The local sponsor and its constituents require a 100-year project, which removes significantly more structures from the floodplain than a 50-year project and is consistent with the Guadalupe River Project located in downtown San Jose. The SCVWD also believes there are significant additional benefits with the 100-year Bypass Plan beyond flood damage reduction, which not only should, but must, be considered. While this project does not contain ecosystem restoration measures (its restoration features are predominately classified as mitigation) the local sponsor strongly believes the authorized Bypass Plan will lead to greater long-term recovery of riparian forest and shaded riparian aquatic habitat and salmonid populations than the Valley View Plan. Additionally, the footprint of the authorized Bypass Plan allows for the inclusion of a continuous recreational trail not allowed by the footprint of the Valley View Plan. This recreational trail is expected to enable over half a million uses per year by recreational and commuter bicyclists, joggers, and walkers.

SCVWD has reconfirmed their intent and financial capability to partner with the Federal Government in constructing the authorized 100-year plan for the Upper Guadalupe River Project and for OMRR&R (operation, maintenance, repair, replacement, and rehabilitation) of the project after construction, regardless of the outcome of the request for consideration for full Federal cost sharing participation in the 2004 authorized Bypass Plan, as presented in this LRR. A statement by SCVWD, of intent and financial capability with regard to the Upper Guadalupe River Project, is presented as Enclosure E4, *Non-Federal Sponsor Statement of Intent and Financial Capability*.

9.0 RECOMMENDATION

The Corps has conducted a limited reevaluation of the Upper Guadalupe Flood Control Project in order to obtain reauthorization for the project due to cost increases. Results of this limited reevaluation report (LRR) show that the authorized locally preferred Bypass Channel Plan remains justified, consistent with environmental requirements, and is still supported by the non-Federal sponsor, the Santa Clara Valley Water District (SCVWD).

Accordingly, I recommend, subject to approval by the Assistant Secretary of the Army, and pursuant to determination of consistency with cost sharing principles as required by Public Law 99-662, the Water Resources Development Act of 1986, as amended by Section 202 of Public Law 104-303, the Water Resources Development Act of 1996, that the Federal Government fully cost share the Bypass Channel Plan offering 100-year flood protection for the Upper Guadalupe River Flood Damage Reduction Project, with an estimated total project cost of \$212,085,000. The Federal government would contribute \$111,542,000, and the non-Federal partner, the Santa Clara Valley Water District, would contribute \$100,543,000. This recommendation is also subject to the non-Federal sponsor agreeing to comply with applicable Federal laws and policies, including the requirements as stated below:

1. Provide a minimum of 35 percent, but not to exceed 50 percent, of total project costs allocated to the NED plan for structural flood protection, as specified below:
 - Enter into an agreement which provides, prior to execution of the project cooperation agreement, 25 percent of preconstruction engineering and design (PED) costs;
 - Provide, during the first year of construction, any additional funds needed to cover the non-Federal share of PED costs;
 - Provide, during construction, a cash contribution equal to 5 percent of total NED project costs;
 - Provide all lands, easements, and rights-of-way, including suitable borrow and dredged or excavated material disposal areas, and perform, or assure the performance of, all relocations, except railroads, determined by the Government to be necessary for the construction, operation, and maintenance of the project;
 - Provide, or pay to the Government the cost of providing, all retaining dikes, wasteweirs, bulkheads, and embankments, including all monitoring features and stilling basins, that may be required at any dredged or excavated material disposal areas required for the construction, operation, and maintenance of the project; and
 - Provide, during construction, any additional costs as necessary to make its total contribution equal to at least 35 percent of total project costs allocated to the NED plan for structural flood protection.
2. Pay 100 percent of the additional cost of the plan for structural flood protection that is in excess of the costs of the NED plan.

3. Provide 50 percent of the separable project costs allocated to recreation, as specified below:
 - Enter into an agreement which provides, prior to execution of the project cooperation agreement, 25 percent of PED costs;
 - Provide, during the first year of construction, any additional funds needed to cover the non-Federal share of PED costs;
 - Provide all lands, easements, and rights-of-way, including suitable borrow and dredged or excavated material disposal areas, and perform, or assure the performance, of all relocations determined by the Government to be necessary for the construction, operation, and maintenance of the project;
 - Provide or pay to the Government the cost of providing all retaining dikes, wasteweirs, bulkheads, and embankments, including all monitoring features and stilling basins, that may be required at any dredged or excavated material disposal areas required for the construction, operation, and maintenance of the project; and
 - Provide, during construction, any additional costs as necessary to make its total contribution equal to 50 percent of separable project costs allocated to recreation.
4. Provide and maintain necessary access roads, parking areas, and other public use facilities open and available to all on equal terms.
5. Give the Government a right to enter, at reasonable times and in a reasonable manner, upon land that the local partner owns or controls for access to the project for the purpose of inspection, and, if necessary, for the purpose of completing, operating, maintaining, repairing, replacing, or rehabilitating the project.
6. Assume responsibility for operating, maintaining, replacing, repairing, and rehabilitating (OMRR&R) the project or completed functional portions of the project, including mitigation features, without cost to the Government, in a manner compatible with the project's authorized purpose and in accordance with applicable Federal and State laws and specific directions prescribed by the Government in the OMRR&R manual and any subsequent amendments thereto. Operations and maintenance will include protecting the channels and other flood protection works from future encroachment or obstruction, including sedimentation and vegetation, that would reduce their flood-carrying capacity or adversely affect the proper functioning or efficient operation and maintenance of the project works. Monitor the status of completed mitigation and provide periodic reports on its condition, and provide repairs and replacement if needed, pursuant to the Monitoring and Mitigation Plan (MMP).
7. Comply with Section 221 of Public Law 91-611, Flood Control Act of 1970, as amended, and Section 103 of the Water Resources Development Act of 1986, Public Law 99-662, as amended, which provides that the Secretary of the Army shall not commence the construction of any water resources project, or separable element thereof, until the non-Federal partner has entered into a written agreement to furnish its required cooperation for the project or separable element.

8. Hold and save the Government free from all damages arising from the construction, operation, maintenance, repair, replacement, and rehabilitation of the project and any project-related betterments, except for damages due to the fault or negligence of the Government or the Government's contractors.
9. Keep and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the project to the extent and in such detail as will properly reflect total project costs.
10. Perform, or cause to be performed, any investigations for hazardous substances that are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 USC 9601-9675, that may exist in, on, or under lands, easements, or rights-of-way necessary for the construction, operation, and maintenance of the project, except that the non-Federal partner shall not perform such investigations on lands, easements, or rights-of-way that the Government determines to be subject to the navigation servitude without prior specific written direction by the Government.
11. Assume complete financial responsibility for all necessary cleanup and response costs for any CERCLA-regulated materials located in, on, or under lands, easements, or rights-of-way that the Government determines necessary for the construction, operation, or maintenance of the project.
12. Agree that, as between the Federal Government and the Non-Federal Sponsor, the Non-Federal Sponsor shall be considered the operator of the project for the purpose of CERCLA liability, and, to the maximum extent practicable, operate, maintain, repair, replace, and rehabilitate the project in a manner that will not cause liability to arise under CERCLA.
13. Prevent obstructions of or encroachments on the project (including prescribing and enforcing regulations to prevent such obstruction or encroachments) which might reduce the level of protection it affords, hinder operation and maintenance, or interfere with its proper function.
14. Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646), as amended by Title IV of the Surface Transportation and Uniform Relocation Assistance act of 1987 (Public Law 100-17), and the Uniform Regulations contained in 49 CFR part 24, in acquiring lands, easements, and rights-of-way, and performing relocations for construction, operation, and maintenance of the project, and inform all affected persons of applicable benefits, policies, and procedures in connection with said act.
15. Comply with all applicable Federal and State laws and regulations, including, but not limited to: Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d) and Department of Defense Directive 5500.11 issued pursuant thereto; Army Regulation 600-7, entitled "Nondiscrimination on the Basis of

Handicap in Programs and Activities Assisted or Conducted by the Department of the Army"; and all applicable federal labor standards requirements including, but not limited to, 40 U.S.C. 3141-3148 and 40 U.S.C. 3701-3708 (revising, codifying and enacting without substantive change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a *et seq.*), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 *et seq.*) and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c)).

16. Provide the non-Federal share of that portion of the costs of archeological data recovery activities associated with historic preservation, that are in excess of 1 percent of the total amount authorized to be appropriated for the project, in accordance with the cost sharing provisions of the agreement.
17. Comply with Section 402 of the Water Resources Development Act of 1986, as amended (33 U.S.C. 701b-12), which requires a Non-Federal interest to participate in and comply with applicable Federal floodplain management and flood insurance programs, prepare a flood plain management plan within one year after the date of signing a project cooperation agreement, and implement the plan not later than one year after completion of construction of the project
18. Publicize floodplain information in the area concerned and shall provide this information to zoning and other regulatory agencies for their use in preventing unwise future development in the floodplain and in adopting such regulations as may be necessary to prevent unwise future development and to ensure compatibility with protection levels provided by the project.
19. Monitor city and county adherence to drainage master plans and performance and operations of detention basins or other facilities built to manage flows.
20. Not use Federal funds to meet the Non-Federal Sponsor's share of total project costs unless the Federal granting agency verifies in writing that the expenditure of such funds is authorized by statute.

San Francisco District has carefully reviewed the authorities for approving post-authorization changes presented in ER 1105-2-100, *Planning Guidance Notebook*, dated 22 April 2000. This review indicates that, while it is within the discretionary authority of the Commander, USACE to approve an exception to NED policy for the Upper Guadalupe River Project, the project must seek congressional reauthorization due to exceedance of the authorized project 902 limit. The modifications presented in the LRR are necessary to bring the project into compliance with Federal and State environmental protection statutes and policies, and will not substantially change the project's scope, location, size, outputs, or purposes from the originally authorized plan.

The Recommendations contained herein reflect the information available at this time and current departmental policies governing formulation of individual projects. They do not reflect program and budgeting priorities inherent in the formulation of a national Civil Works construction program nor the perspective of higher review levels within the Executive Branch. Consequently, the recommendations may be modified before they are

approved. However, prior to approval, the partner, the State, interested Federal agencies, and other parties will be advised of any modifications and will be afforded an opportunity to comment further.

2/22/05

Date

A handwritten signature in black ink, appearing to read "Philip T. Feir", written over a horizontal line.

Philip T. Feir
Lieutenant Colonel, Corps of
Engineers
District Engineer