

**REPORT TO
THE CONGRESS OF THE UNITED STATES**

**REVIEW OF PLANNED FEDERAL CONTRIBUTION
TOWARD THE COST OF THE STATE-CONSTRUCTED
DEL VALLE DAM AND RESERVOIR
ALAMEDA COUNTY, CALIFORNIA**

**CORPS OF ENGINEERS (CIVIL FUNCTIONS)
DEPARTMENT OF THE ARMY**



**BY
THE COMPTROLLER GENERAL
OF THE UNITED STATES**

JANUARY 1967

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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-118634

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To the President of the Senate and the
Speaker of the House of Representatives

The General Accounting Office has reviewed the determination by the Corps of Engineers (Civil Functions), Department of the Army, of the planned Federal contribution toward the cost of the Del Valle Dam and Reservoir planned for construction by the State of California.

Although it is the policy of the Corps of Engineers to recommend to the Congress a local contribution toward the costs of flood-control reservoirs that serve essentially as local flood-protection measures or produce some specific local benefit, a local contribution was not recommended in connection with the costs allocated to flood control for the Del Valle Dam and Reservoir.

The Chief of Engineers did not recommend a local contribution in the case of the Del Valle Dam and Reservoir because of his determination that the project benefits would be widespread. However, we believe that a more complete evaluation of the factors involved, which, in our opinion, reasonably should have been made in the circumstances, would have indicated that a local contribution of between \$1.1 million and \$2.4 million may have been appropriate in connection with the proposed project costs allocated to flood control. The flood-control storage to be provided by the Del Valle Dam and Reservoir appears to be essentially a local flood-protection measure for which, under Corps policy, a local contribution could have been recommended. Our review indicates that (1) the project serves in lieu of other feasible local protection measures and (2) benefits of sufficient magnitude to justify the project are concentrated in one locality and will accrue to identifiable interests.

The Department of the Army and the Corps of Engineers do not concur in our views and they cite various reasons why a local contribution was not recommended. Their views are recognized in the report.

We believe that the Corps does not have adequate procedures for collecting and reporting information with respect to local benefits on projects such as Del Valle Dam and Reservoir. So that all essential

information in this respect is available, we are recommending that the Secretary of the Army request the Chief of Engineers to revise existing procedures, which would require a more complete analysis of the benefits expected to result from the construction of future flood-control works and clearly identify the recipients to whom substantial benefits will accrue, and that this information be made a part of each project report submitted to the Congress for approval.

We are bringing this matter to the attention of the Congress because, in our opinion, it illustrates the need for the Corps of Engineers to augment its procedures relating to project benefit analyses and reporting. Also, during the Eighty-ninth Congress, second session, legislation was introduced that would have authorized a reevaluation of the flood-control costs of the Del Valle Dam and Reservoir, which could have affected the amount of the Federal contribution. Accordingly, the Congress may wish to consider the information presented in this report should legislation of a similar nature be introduced in the future.

Copies of this report are being sent to the Director, Bureau of the Budget; the Secretary of Defense; and the Secretary of the Army.



Comptroller General
of the United States

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REPORT ON
REVIEW OF PLANNED FEDERAL CONTRIBUTION
TOWARD THE COST OF THE STATE-CONSTRUCTED
DEL VALLE DAM AND RESERVOIR
ALAMEDA COUNTY, CALIFORNIA
CORPS OF ENGINEERS (CIVIL FUNCTIONS)
DEPARTMENT OF THE ARMY

INTRODUCTION

The General Accounting Office has reviewed the determination by the Corps of Engineers (Civil Functions), Department of the Army, of the planned Federal contribution toward the cost of the Del Valle Dam and Reservoir planned for construction by the State of California. As part of our continued review of Federal participation in State-constructed projects, we reviewed the determination for the Del Valle Dam and Reservoir because our preliminary examination indicated that the Corps had recommended no local contribution, although Corps regulations provide for cost sharing for flood-control reservoirs whose effects are limited and primarily local in nature. Our review was made pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

Our review included an examination of the basic laws and related legislation which authorized Federal participation in the project, applicable Corps of Engineers policies and procedures, Corps of Engineers cost apportionment computations and available supporting documents, and the land-ownership pattern in the project area based upon county and other local records. Our review was made at the Office of the Chief of Engineers, Washington, D.C.; Office of the Division Engineer, San Francisco, California; and Office of the District Engineer, San Francisco, California.

The principal officials of the Department of Defense and the Department of the Army responsible for administration of activities discussed in this report are listed in appendix I.

BACKGROUND

In accordance with the Flood Control Act of 1962 (76 Stat. 1191), the Federal Government is planning to contribute toward the costs of constructing, operating, and maintaining the Del Valle Dam and Reservoir--a multiple-purpose dam and reservoir--to be constructed by the State of California (State), about 21 miles upstream from the coastal-plain reach of the Alameda Creek Basin. In addition, the Federal Government will construct channel and levee improvements in the Alameda Creek's 12-mile coastal-plain reach. These features constitute the Alameda Creek Flood Control Project.

The California Department of Water Resources plans to construct the Del Valle Dam and Reservoir in Alameda County on Arroyo del Valle--a tributary to Alameda Creek--as a feature of the South Bay Aqueduct which is a part of the California Water Plan. The dam and reservoir will be used for the regulation of municipal and industrial water supplied from the South Bay Aqueduct, incidental replenishment of local ground water storage basins, recreation, irrigation, and flood control. Current plans include a reservoir with a gross storage capacity of 74,000 acre-feet. Of this storage, 35,000 acre-feet will be for flood control; 30,000 acre-feet will be for conservation, including 1,000 acre-feet overlap in flood control; and 10,000 acre-feet will be for silt retention and dead storage.

The cost of the Del Valle Dam and Reservoir, as estimated by the State of California in January 1965, is \$17,734,000--an increase of \$5,334,000 over the previous estimate of \$12,400,000 made in March 1961. According to the State, the increase is due to the discovery of subsurface geological conditions considerably more serious than previously anticipated.

A contract between the Federal Government and the State of California provides that, subject to appropriation by the Congress, the Federal contribution shall be 30.7 percent of the actual construction costs of the Del Valle Dam and Reservoir, exclusive of the cost of recreational facilities, but shall be limited to \$4,080,000 in accordance with the terms of the project authorization. A proportionate share of the related operation and maintenance costs is also to be contributed by the Federal Government. This amount--\$776,000--is the present estimate of the Federal share of operation and maintenance costs of the reservoir for a 50-year period. However, the amount of Federal contribution is qualified in the contract on the basis of a bill (H.R. 15147, 89th Cong. 2d sess.) introduced in the Congress which would authorize a re-evaluation of the flood-control costs of the Del Valle Dam and Reservoir. This could have affected the amount of the Federal contribution.

Pursuant to two resolutions adopted by the Public Works Committee, United States Senate in 1949, the San Francisco District Engineer conducted reviews and, in March 1961, issued a "Review Report for Flood Control and Allied Purposes, Alameda Creek, Alameda County, California," to the South Pacific Division Engineer stating that there was an urgent need for flood-control improvements and for additional water for irrigation and domestic and industrial uses in the Alameda Creek Basin. Accordingly, the Corps formulated the proposed Alameda Creek Flood Control Project, recommending the construction of Federal channel and levee improvements in the 12-mile coastal-plain reach of the Alameda Creek Basin as well as Federal participation in the cost of the Del Valle Dam and Reservoir.

The project as recommended by the San Francisco District (District) of the Corps contained a requirement that local interests contribute toward the costs allocated to flood-control storage in the reservoir in order to recognize the transfer of flood-protection construction costs from channel features to reservoir features. The District considered the reservoir a substitute for a portion of the local channel and levee improvements which otherwise would have been necessary in lieu of the flood-control storage provided by the Del Valle Dam and Reservoir. The amount of local contribution recommended by the District Engineer toward the flood-control costs of the Del Valle Dam and Reservoir was based upon the savings which would accrue to the downstream interests and was computed as follows:

Local savings in lands, easements, rights-of-ways, and relocations which would otherwise have been necessary in the costal plain	\$ 700,000
Capitalized value of the \$21,000 annual savings in operation and maintenance related to the above	<u>581,000</u>
Total	<u>\$1,281,000</u>

The March 1961 report was transmitted to the Department of Water Resources, State of California, on January 22, 1962, for review and official comment, in accordance with the provisions of the Flood Control Act of 1944 (33 U.S.C. 701-1).

On March 23, 1962, the Director, Department of Water Resources, State of California, transmitted comments on the report to the Chief of Engineers stating in part that:

"The department does not concur with the concept of deducting from the federal contribution by hypothetical savings, estimated to be \$700,000, for excess costs of

land and relocations for a rejected project as a basis for joint multipurpose development of Arroyo del Valle. As previously stated, it is believed that proper project formulation precludes consideration of such theoretical savings from a rejected alternative project. For the same reason, the department objects to the proposed reduction in the federal contribution toward the allocated cost of the operation, maintenance and replacement for the flood control portion of the multipurpose reservoir."

On August 16, 1962, the Chief of Engineers submitted his report to the Secretary of the Army, accompanied by the reports of the Board of Engineers for Rivers and Harbors, the Division Engineer, and the District Engineer, for transmission to the Congress. The Chief of Engineers made the following comment:

"Concerning the concept of deducting the non-Federal land and relocation savings in the Coastal Plain from the proposed Federal share of the project costs, I find that the allocation of cost, in the amount of \$4,010,000, to flood control in the reservoir as determined by the Board of Engineers for Rivers and Harbors is reasonable. I find, also, that the flood control benefits used as a basis for that allocation are widespread. Therefore, I believe that under established policies governing Federal participation in such projects, the entire allocation of costs to flood control in the Del Valle Reservoir properly should be borne by the Federal Government." (Underscoring supplied.)

The project for flood protection on Alameda Creek, California, which was authorized by the Flood Control Act of 1962, approved October 23, 1962, substantially in accordance with the recommendations of the Chief of Engineers, requires no local contribution toward the estimated costs of the Del Valle Dam and Reservoir that are allocated to flood control.

FINDING, RECOMMENDATION, AND
MATTER FOR CONSIDERATION OF THE CONGRESS

LOCAL CONTRIBUTION TOWARD THE FLOOD-
CONTROL COSTS OF THE DEL VALLE DAM
AND RESERVOIR MAY BE APPROPRIATE

Although it is the policy of the Corps of Engineers (Corps) to recommend a local contribution toward the costs of flood-control reservoirs that serve essentially as local flood-protection measures or produce some specific local benefit, the Corps did not make a recommendation to the Congress for such contribution in the case of the Del Valle Dam and Reservoir. We believe that a more complete evaluation of the factors involved, which, in our opinion, reasonably should have been made in the circumstances, would have indicated that a local contribution of between \$1.1 million and \$2.4 million may have been appropriate in connection with the proposed project costs allocated to flood control. The flood-control storage to be provided by the Del Valle Dam and Reservoir appears to be essentially a local flood-protection measure for which, under Corps policy, a local contribution could have been recommended. Our review indicates that (1) the project serves in lieu of other feasible local protection measures and (2) benefits of sufficient magnitude to justify the project are concentrated in one locality and will accrue to identifiable interests.

Neither the authorizing act nor the general body of Federal law states specifically the principles and procedures to be followed in determining the amount of Federal financial participation in such partnership projects. An alternative to a partnership-constructed project, which as one of its purposes would satisfy Federal responsibilities for flood control, would be an all federally financed project. In the absence of specific policies and

procedures stated in Federal law relating to the determination of the Federal financial contribution to partnership projects, we believe that the policy relating to the determination of local contribution and cooperation in federally constructed civil works projects should be applied.

The general requirements for local cooperation on the financing of flood-control projects are contained in the Flood Control Acts of 1936 and 1938 (33 U.S.C. 701c and 701c-1), as amended. The Corps has stated that:

"In accordance with the policy established in the 1938 Flood Control Act, and subsequent acts, local cooperation is generally not required for reservoirs constructed and operated solely for flood control. This policy is based on the fact that reservoirs for flood control normally affect long reaches of a river, often crossing State lines, and accordingly, that it would be impracticable to require local cooperation from the many, but widely diffused beneficiaries. In special cases where small reservoirs are provided in lieu of normal types of local flood protection works and the effects are essentially local in character, the authorizing acts may specify local cooperation generally similar to that outlined below for local flood protection works.

"*** The Flood Control Act of 1936, as modified by subsequent acts, establishes a general policy for local protection projects that, as a minimum, non-Federal interests shall (a) provide lands, easements, and rights-of-way; (b) hold and save the United States free from damages due to the construction works; and (c) maintain and operate the works upon completion. Authorizing acts for specific projects may require additional local cooperation under unusual circumstances such as those involving special local benefits or betterments."

Consistent with these requirements, the Corps instructions provide that:

"In the case of flood control reservoirs whose effects are primarily local in nature and which in effect serve in lieu of other types of local protection measures, the requirements of local cooperation applicable to local flood protection measures may be applied when a definite basis exists for deviation from the general policy of full Federal assumption of costs for reservoirs. Decisions to deviate from the general policy in connection with cost-sharing for small reservoirs should be based on consideration of many factors including such general criteria as the reservoir serves in lieu of other types of feasible local protection measures, or benefits of sufficient magnitude to justify the project are concentrated in one locality or would accrue to readily identifiable developments in a continuous damage reach or problem area, or the reservoir is of such relatively small size that its effects are limited in areal extent." (Under-scoring supplied.)

The Chief of Engineers did not recommend a local contribution in the case of the Del Valle Dam and Reservoir because of his determination that the benefits would be widespread. However, we were unable to find, nor could the Corps provide us with, a study showing an evaluation of benefits to support the determination that the benefits will be widespread and not, as we believe, concentrated in one locality and accruing to identifiable interests. Moreover, except for the Corps instructions previously mentioned, the Corps has not established any criteria defining or distinguishing between local and widespread benefits.

The Corps has acknowledged that, in some cases, the provisions of the aforementioned policy concerning local cooperation have been applied in connection with flood-control reservoirs whose effects are primarily local in nature. On April 5, 1965, during hearings before the Subcommittee of the Committee on Appropriations, House of Representatives, the Director of Civil Works stated that:

"For flood control reservoirs, local cooperation is generally not required in terms of either providing the lands or in cash contributions, and that policy is based on the fact that these reservoirs normally affect long reaches of a river, they often cross State lines, and the beneficiaries are widely diffused. There are a few cases where we put in small reservoirs, and where we think we can identify the beneficiaries, that we have required local cooperation similar to that for local flood protection works."

Although we recognize that the amount of a local contribution is variable, depending upon the factors involved and the method of computation, we used two methods in order to show the possible range of amounts that the Corps could have considered if it had recommended a local contribution.

The \$1.1 million was computed on the premise that it would have been reasonable for local beneficiaries to contribute, as a minimum, the lands, easements, rights-of-way, etc. We were informed by District officials that another acceptable method, which has been used by the Corps to compute the amount of local contribution, is based on the ratio that one half of the local flood-control benefits bears to the total flood-control benefits. If this method had been used by the Corps, the local contribution would have amounted to about \$2.4 million.

Flood-control storage to be provided serves in lieu of other feasible local protection measures

The flood-control features of the Alameda Creek Flood Control Project include (1) 35,000 acre-feet of flood-control storage in the Del Valle Dam and Reservoir and (2) 12 miles of channel improvement on the coastal plain to contain a flow of water of 52,000 cubic feet per second. The Corps had determined that this combination of flood-control storage and channel improvement was the best

means of providing flood protection to the project flood-plain area comprising some 23,700 acres of lands, including 20,000 acres in the coastal plain and 3,700 acres in the Livermore Valley and Niles Canyon areas. All three areas lie within the Alameda Creek drainage basin and the County of Alameda in the State of California.

The report of the District Engineer stated that protection for the coastal plain alone could have been provided by the construction of a 71,000 second-foot channel without flood-control storage at the reservoir, but this would not have provided protection to the 3,700 acres of flood-plain area located in Livermore Valley and Niles Canyon.

The District Engineer considered the reservoir to be a substitution in the type of local flood-protection works warranted in the coastal-plain reach. He determined that the need for a larger channel and levee project, otherwise warranted, would be obviated by providing the reservoir with flood-control storage capacity. Since the reservoir in effect would be serving in lieu of local protection measures requiring local cooperation, the District Engineer considered a local contribution toward the flood-control costs of the reservoir to be appropriate. He based the amount of such contribution on the savings to local interests resulting from the transfer of flood-protection construction costs from channel features to reservoir features. However, as noted previously, a local contribution was not required because the Chief of Engineers considered the flood-control benefits to be widespread.

Benefits of sufficient magnitude
are concentrated in one locality
and accrue to identifiable interests

Livermore Valley, Niles Canyon, and the coastal plain were divided by the Corps into six separate areas for project study purposes. Livermore Valley included project areas I, II, and III; Niles Canyon, area IV; and the coastal plain, areas V and VI. The Del Valle Dam and Reservoir will not provide flood protection to area II. Improvements which would afford flood protection to this area were not recommended by the Corps nor authorized by the Congress.

Flood-damage prevention and increased agricultural production benefits which will result from the dam and reservoir project were computed by the Corps as follows:

<u>Area</u>	<u>Annual benefits</u>	<u>Percentage of benefits</u>
Coastal-plain reach (areas V and VI)	\$322,000	74
Upper Alameda Creek (areas I, III, and IV)	<u>114,000</u>	<u>26</u>
Total	<u>\$436,000</u>	<u>100</u>

These figures show that about 74 percent of the project benefits are concentrated in the coastal-plain reach. The remainder, or 26 percent, represents benefits applicable to the Upper Alameda Creek area which includes Livermore Valley and Niles Canyon.

District officials informed us that the general pattern of land ownership was known during preparation of the survey report and that real estate matters pertinent to all phases of the survey report were reviewed and evaluated to ensure compliance with existing policies, including any special-interest participation. They also informed us that they had determined the nature of the project

benefits and that no local contribution was considered to be required, since they concluded that the flood-control benefits would be of general significance.

The Corps was unable, however, to furnish us with documentation to enable us to determine who owned the land receiving benefits and what use was being made of the land. By using county and other local records, we analyzed the land ownership within the project flood-plain area comprising areas I, III, IV, V, and VI, which total about 23,700 acres. Our review showed that 11,200 acres, or about 47 percent of the area, was owned by seven local interests that included 4 companies (7,500 acres), 2 families (2,900 acres), and the City and County of San Francisco (800 acres). Furthermore, in the coastal-plain reach (areas V and VI), where 74 percent of the flood-prevention benefits will be concentrated, five of the seven local interests previously mentioned own 8,800 acres, or about 44 percent of the 20,000 acres in the two areas.

We also found that the Corps had estimated that, over the life of the project in area VI, the use of lands for agricultural and commercial purposes (salt ponds) would decrease by about 43 percent and 26 percent, respectively. These lands will go to higher land use, such as residential. Land enhancement benefits attributable to this land conversion were estimated by the Corps at \$1,027,000 annually. The Corps did not consider that any of these benefits would result from the operation of the Del Valle Dam and Reservoir, nor did the Corps determine what portion of these benefits would accrue to three local interests which own about 8,600 acres, or about 45 percent of the 19,100 acres included in area VI.

Furthermore, the Corps apparently chose the combined reservoir and channel improvements over larger channel improvements in order

to maximize flood-control benefits by making additional benefits possible in the Livermore Valley and Niles Canyon areas (Upper Alameda Creek). Our review showed that, of the 3,700 acres of land in the Livermore Valley and Niles Canyon areas--areas I, III, and IV--that will receive the benefits of protection from floods, 2,400 acres, or about 65 percent, are owned by four local interests.

Corps officials informed us that, in determining beneficiaries of a project, acreage alone does not provide a valid basis for making a determination. We were advised that the value of improvements to land in the flood plain and the types of flood damage experienced historically are also important determinants of beneficiaries. An analysis of the flood-damage and land-value data contained in the Corps' "Review Report for Flood Control and Allied Purposes, Alameda Creek, California," showed that areas V and VI (where five local interests owned 44 percent of the areas and 74 percent of the benefits are concentrated) had (1) land and buildings with a combined value of \$89,800,000, (2) annual agricultural, industrial, and commercial production with a gross value of \$22,850,000, and (3) significant land enhancement benefits.

Areas V and VI would benefit significantly from flood-damage protection since they sustained generally substantial damages in the 1952, 1955, and 1958 floods which the proposed Del Valle Dam and Reservoir project is designed to prevent. See appendix II for details on flood damages and land values. Although these factors may have a bearing on the identification of individual beneficiaries, in our opinion they do not detract from the fact that the benefits which will result from construction of the dam and reservoir are confined to a definite locality and will accrue to identifiable beneficiaries within this locality.

Agency comments and our evaluation thereof

We brought our finding to the attention of the Department of Defense and the Department of the Army and proposed that the Secretary of the Army direct the Chief of Engineers to prepare, as part of each project report submitted to the Congress for approval, a complete analysis of the benefits expected to result from the construction of flood-control works on future projects and clearly identify the recipients to whom substantial benefits will accrue and include this information as a part of a recommendation as to whether a local contribution may or may not be warranted.

In a letter dated May 5, 1966, commenting on our proposal, the Department of the Army stated that certain actions which would be taken pursuant to the recommendations of a Task Force on Federal Flood Control Policy appointed by the Bureau of the Budget (report submitted to the Congress by the President on August 10, 1966) would be more effective in modifying cost-sharing requirements for federally assisted projects than the actions proposed by us.

The Department did not describe what actions it was planning to take or when such actions would be taken. Furthermore, we believe that the Task Force's recommendations for a revised cost-sharing policy cannot be implemented without procedures that require an analysis of the benefits and an identification of the beneficiaries of a proposed project, as we proposed to the Department. Also, it is apparent that these recommendations will require not only the implementation and joint agreement of several agencies other than the Department of the Army, but in certain instances the enactment of legislation. For example, those recommendations dealing with modifying cost-sharing requirements, while proposing greater cost sharing by beneficiaries, would apparently require

legislation, since they could not in all instances be accomplished within the scope of existing authority. Our proposal, which we believe would be fundamental in the implementation of the recommendations made by the Task Force, could be effected immediately under existing authority of the Secretary of the Army.

With respect to those who would benefit from the project, the Corps stated:

"The GAO report is silent, however, on the extent of occupancy in the flood plain. Such occupancy is a truer index of prospective beneficiaries than that of ownership. *** It is the present occupants, plus any increase in occupancy which is bound to take place even in the absence of the improvements, who will benefit from the damages prevented. With this widespread occupancy, it can hardly be considered that benefits would accrue to a limited number of identifiable interests."

While the extent of occupancy (population) may have some bearing as to whether a particular situation would require local cooperation, in this instance the population is concentrated, for the most part, in one locality and is not widely diffused so as to make a contribution from those benefiting from the project impracticable. We believe that the criteria contained in Corps instructions, although limited, provide a more reasonable and equitable measure for determining whether the requirements of local cooperation should be applied.

In consonance with these criteria, we found that 74 percent of the project's flood-protection benefits, as computed by the Corps, were provided to a population concentrated in a 12-mile coastal-plain reach where 44 percent of the land was owned by five local interests. Furthermore, flood-damage data for the coastal-plain areas V and VI, compiled by the Corps, shows that (1) most of the

flood damage has been to industrial and agricultural development and (2) the damage to residential development has generally been minor and a small portion of the total flood damage in that area. (See app. II.) One exception occurred in 1955 when the amount of residential flood damage in area V was \$447,000, or about 17 percent of total flood damage in that area. This data also shows that in 1952 the residential property in the coastal plain sustained flood damage amounting to \$25,000.

In comparison, Corps records show that during the same year one large landowner sustained a loss of \$14,000 in damages to levees and salt ponds and lost about 108,000 tons of salt in brine form, for which the value was not available.

The Corps also stated that the reservoir could not be considered a substitute or "in lieu thereof" project but, rather, was a necessary part of an overall plan to provide the maximum benefits at minimum costs. In our opinion, the Corps position is not consistent with the findings and recommendations resulting from the District Engineer's study of the project. For example, the Corps recognized that the project is a substitute for, and in lieu of, the more extensive local channel improvements justified in the coastal-plain area, and on this basis the District Engineer recommended a local contribution, stating:

"Estimated first cost savings in Coastal-Plain channel improvements total \$2,700,000 of which \$2,000,000 would be in channel construction and \$700,000 would be in rights-of-way and relocations.

"A local interest first cost in the flood control storage in Del Valle Reservoir of \$700,000 is adopted to reflect the transfer of flood protection construction costs from channel feature to reservoir feature." (Under-scoring supplied.)

Further, in Senate Document 128, Eighty-seventh Congress, second session, the Corps, in discussing the protests by the Department of Water Resources, State of California, against the above recommendation, stated:

"The reservoir provides a substitution in the type of flood protection works warranted in the Coastal Plain. The apportionment of reservoir flood control costs reflecting features substituted, is therefore, considered reasonable."

The Corps advised us that (1) the addition of downstream channel and levee improvements should not have a bearing on the apportionment of reservoir costs allocated to flood control, (2) our report errs when it contends that 74 percent (or any amount) is a substitute for an otherwise feasible coastal-plain project, and (3) our report errs when it attempts to develop an amount of local contribution based on such premise.

We do not agree that the coastal plain improvements--downstream channel and levee improvements--would be an addition to the flood protection to be provided by the reservoir, because the Corps study shows that the channel and levee improvements together with the reservoir constitute the only feasible means of providing the necessary flood protection and that the reservoir was a substitute for a portion of the local channel and levee improvements which were otherwise feasible and would be necessary in lieu of the flood-control storage provided by the Del Valle Dam and Reservoir.

Conclusion

In our opinion the Corps of Engineers has the responsibility to gather and carefully consider the information fundamentally essential for making a recommendation as to whether or not any costs should be borne, as far as practicable, by those who benefit

directly from construction of the works. Such information should be reported to the Congress and should include the nature and extent of local-interest holdings within the project flood plain and the nature and extent of project benefits which will accrue to these local interests. The Corps does not have adequate procedures for collecting and reporting such information.

We believe that the matters discussed in this report indicate the need for more effective procedures for establishing and reporting to the Congress the basis for requiring or not requiring local cooperation. We estimate that a local contribution toward the flood-control cost of the Del Valle project of between \$1.1 million and \$2.4 million would have been appropriate, depending upon the method used in the computation.

We believe that this project meets the Corps requirements for local contribution because (1) the project serves in lieu of other feasible local protection measures, (2) benefits of sufficient magnitude (74 percent in the coastal-plain reach) to justify the project are concentrated in one locality and will accrue in a substantial part to readily identifiable entities, (3) benefits that the District did not identify will accrue to the five local interests which own 44 percent of the total land in the coastal-plain reach in a continuous damage reach or problem area, (4) almost one half of the total lands in the project's flood-plain area is owned by seven local interests, and (5) the flood-control features of the reservoir affect only a 33-mile reach of Alameda Creek located entirely within one county, in that the reservoir is located about 21 miles upstream from the coastal-plain reach which is 12 miles in length.

Recommendation to the Secretary of the Army

We recommend that, to provide assurance that all essential information is available to the Chief of Engineers for consideration in making recommendations relative to local cooperation and to provide assistance to the Congress in evaluating these recommendations, the Secretary request the Chief of Engineers to (1) revise the existing regulations in order to provide for the preparation of more complete analyses of the benefits expected to result from the construction of flood-control works on future projects and clearly identify the recipients to whom substantial benefits will accrue and (2) include this information as a part of each project report submitted to the Congress for approval.

Matter for consideration of the Congress

During the Eighty-ninth Congress, second session, legislation was proposed which would have authorized a reevaluation of the flood-control costs expected as a result of construction of the Del Valle Dam and Reservoir. This could have affected the amount of the Federal contribution. Therefore, the Congress may wish to consider the information presented in this report should legislation of a similar nature be introduced in the future.

APPENDIXES

PRINCIPAL OFFICIALS OF THE DEPARTMENT OF DEFENSE
AND THE DEPARTMENT OF THE ARMY
RESPONSIBLE FOR
ADMINISTRATION OF ACTIVITIES
DISCUSSED IN THIS REPORT

	<u>Tenure of office</u>	
	<u>From</u>	<u>To</u>
<u>DEPARTMENT OF DEFENSE</u>		
SECRETARY OF DEFENSE:		
Robert S. McNamara	Jan. 1961	Present
Thomas S. Gates, Jr.	Dec. 1959	Jan. 1961
Neil H. McElroy	Oct. 1957	Dec. 1959
DEPUTY SECRETARY OF DEFENSE:		
Cyrus R. Vance	Jan. 1964	Present
Roswell L. Gilpatric	Jan. 1961	Jan. 1964
James H. Douglas	Dec. 1959	Jan. 1961
Thomas S. Gates, Jr.	June 1959	Dec. 1959
Donald A. Quarles	May 1957	June 1959
<u>DEPARTMENT OF THE ARMY</u>		
SECRETARY OF THE ARMY:		
Stanley P. Resor	July 1965	Present
Stephen Ailes	Jan. 1964	July 1965
Cyrus R. Vance	July 1962	Jan. 1964
Elvis J. Stahr, Jr.	Jan. 1961	June 1962
Wilber M. Brucker	July 1955	Jan. 1961
CHIEF OF ENGINEERS:		
Lt. Gen. William F. Cassidy	July 1965	Present
Lt. Gen. Walter K. Wilson, Jr.	May 1961	June 1965
Lt. Gen. Emerson C. Itschner	Oct. 1956	May 1961

PRINCIPAL OFFICIALS OF THE DEPARTMENT OF DEFENSE

AND THE DEPARTMENT OF THE ARMY

RESPONSIBLE FOR

ADMINISTRATION OF ACTIVITIES

DISCUSSED IN THIS REPORT (continued)

Tenure of officeFromToDEPARTMENT OF THE ARMY (continued)

DIVISION ENGINEER, SOUTH PACIFIC DIVISION:

Brig. Gen. Ellis E. Wilhoyt, Jr.	June 1965	Present
Brig. Gen. Arthur H. Frye, Jr.	Sept. 1961	June 1965
Brig. Gen. Robert G. MacDonnell	July 1958	Aug. 1961
Brig. Gen. William F. Cassidy	June 1955	July 1958

DISTRICT ENGINEER, SAN FRANCISCO DISTRICT:

Lt. Col. Frank C. Boerger	June 1966	Present
Lt. Col. Robert H. Allan	Sept. 1963	June 1966
Col. John A. Morrison	July 1960	Sept. 1963
Col. John S. Harnett	July 1957	July 1960

SCHEDULES OF IMPROVEMENTS, BENEFITS
AND TYPES OF FLOOD DAMAGES EXPERIENCED

Value of Flood-Plain Improvements
Coastal-Plain Areas V and VI

<u>Type of property</u>	<u>Acres</u>	<u>Estimated value of</u>	
		<u>Land and buildings</u>	<u>Gross annual product</u>
Agriculture	11,480	\$31,400,000	\$ 7,850,000
Residential commercial	1,150	38,200,000	760,000
Industrial	890	16,800,000	14,240,000
Salt ponds	4,310	2,700,000	N/A
Undeveloped and unused	<u>2,170</u>	<u>700,000</u>	<u>-</u>
Total	<u>20,000</u>	<u>\$89,800,000</u>	<u>\$22,850,000</u>

Project Flood-Damage Prevention
Excluding Land Enhancement

<u>Areas (note a)</u>				<u>Total</u>
<u>I</u>	<u>III</u>	<u>V</u>	<u>VI</u>	
\$23,000	\$43,000	\$136,000	\$451,000	\$653,000

SCHEDULES OF IMPROVEMENTS, BENEFITS
AND TYPES OF FLOOD DAMAGES EXPERIENCED (continued)

<u>Type of property</u>	<u>Alameda Creek Flood Damages</u> <u>1952, 1955, and 1958^b</u>			
	1952 Flood-damage areas (note c)		1955 Flood-damage areas	
	<u>I</u>	<u>VI</u>	<u>I</u>	<u>III</u>
Agriculture	\$ -	\$ 598,000	\$ 90,000	\$45,000
Residential	-	25,000	38,000	19,000
Commercial	-	23,000	-	3,000
Industrial	-	1,108,000	163,000	-
Public facilities	<u>5,000</u>	<u>70,000</u>	<u>22,000</u>	<u>21,000</u>
Total	<u>\$5,000</u>	<u>\$1,824,000</u>	<u>\$313,000</u>	<u>\$88,000</u>

^aAreas II and IV are excluded. The project relating to area II was not recommended by the Corps. Area IV is the Niles Canyon where the Corps in its appendix A states that the major damages (95 percent of the total damages in area IV) are the result of destruction of railroad and highway facilities.

^bData presented in the Corps of Engineers report "Review Report for Flood Control and Allied Purposes, Alameda Creek, Alameda County, California," March 1961.

^cNone for areas III and V in 1952.

^dNone for areas I and V for 1958.

1955 Flood-damage areas		1958 Flood-damage areas (note d)	
<u>V</u>	<u>VI</u>	<u>III</u>	<u>VI</u>
\$ -	\$ 798,000	\$112,000	\$521,000
447,000	23,000	10,000	44,000
33,000	11,000	3,000	7,000
2,199,000	123,000	-	150,000
-	54,000	-	40,000
<u>2,679,000</u>	<u>\$1,009,000</u>	<u>\$125,000</u>	<u>\$762,000</u>



DEPARTMENT OF THE ARMY
WASHINGTON, D.C. 20310

5 MAY 1966

Mr. J. T. Hall, Jr.
Assistant Director
Civil Accounting and Auditing Section
United States General Accounting Office

Dear Mr. Hall:

Reference is made to your letter to the Secretary of the Army, dated 17 February 1966, forwarding for review and comment copies of a proposed report to the Congress on a review of the planned Federal contribution toward the cost of the Del Valle Dam and Reservoir which is planned for construction by the State of California in partnership with the Federal Government.

The draft report recommends that the Secretary of the Army direct the Chief of Engineers to (1) require, as a condition for the Federal participation, a contribution from local interests benefiting from the project and (2) prepare a complete analysis of benefits expected to result from future flood control works and to clearly identify the recipients to whom substantial benefits will accrue. The report also urges that such an analysis, together with a recommendation pertaining to local contributions, be made part of each report submitted to Congress for approval.

Detailed comments prepared by the District Engineer are inclosed. These comments have been approved by the Division Engineer and the Chief of Engineers.

As noted in the draft report, Federal contribution toward the cost of the Del Valle Dam and Reservoir is authorized by the Flood Control Act of 1962. This authorization does not provide for the local contribution the draft report recommends that the Secretary of the Army direct the Chief of Engineers to require. It would not be appropriate, therefore, for the Secretary of the Army to issue such a directive to the Chief of Engineers.

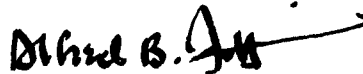
The problem of cost-sharing for future flood control projects is one that understandably concerns not only the Comptroller General but also the Congressional Public Works and Appropriations Committees,

the Bureau of the Budget and the Federal departments represented on the Water Resources Council. The Bureau of the Budget concern was reflected in its recent appointment of a Task Force on Federal Flood Control Policy. The Task Force submitted its report "A Unified National Program for Managing Flood Losses" to the Bureau of the Budget February 24, 1966. The report is currently being reviewed within the Executive Branch. I believe that actions which will be taken pursuant to the recommendations in this report will be more effective in modifying cost-sharing requirements for Federally assisted projects than the action proposed by the draft report.

I suggest that the draft report be modified to the extent you consider warranted after consideration of our comments.

The opportunity to review your proposed report is appreciated. The copies of the report which were furnished for review are returned as requested.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Alfred B. Fitt", with a long horizontal flourish extending to the right.

Alfred B. Fitt
Special Assistant (Civil Functions)

2 Incl
A/S

SPNGP (3 Mar 66)

2d Ind

SUBJECT: GAO Draft Report, dated 17 February 1966, "Review of Planned Federal Contribution toward the Cost of the State-Constructed Del Valle Dam and Reservoir, Alameda County, California"

U.S. Army Engineer District, San Francisco, California 24 March 1966

TO: Division Engineer, U.S. Army Engr Div, SoPac, San Francisco, Calif

1. The conclusions and recommendations in the draft of the GAO proposed report to Congress, with regard to local contribution toward the costs allocated to flood control for the del Valle reservoir project, are essentially the same as those contained in the GAO Agenda for the exit conference held 16 July 1965 in the office of the District Engineer. Copies of the Memorandum for Record dated 22 July 1965 were previously furnished SPD and OCE and additional copies are inclosed for ready reference. At the exit conference the District Engineer and his representatives, together with SPD representatives, generally disagreed with interpretations made by GAO on laws, regulations and policies of the Corps of Engineers in the endeavor, by that agency, to develop a basis for justifying local contribution toward the flood-control costs for the del Valle reservoir project. No new arguments have been included in the draft of the proposed GAO report which would alter the previous views of the Corps of Engineers that it is in disagreement with the recommendations and with the bases upon which these recommendations were predicated.

2. The major premise of GAO's findings is apparently predicated on its contention that benefits (from del Valle reservoir project) would accrue to a relatively limited number of "identifiable local interests" within the flood plain areas. Included in this category of "local interests" are two railroads, a State highway and holdings and developments by the City and County of San Francisco. The GAO report is silent, however, on the extent of occupancy in the flood plain. Such occupancy is a truer index of prospective beneficiaries than that of ownership. Based on the census of that year, it is estimated that in 1960 there were 12,000 persons occupying the flood plain area (including some 400 farm-operators) which the project would protect. The area lies in the rapidly expanding San Francisco Bay complex where the pressures for

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24 March 1966

SUBJECT: GAO Draft Report, dated 17 February 1966, "Review of Planned Federal Contribution toward the Cost of the State-Constructed Del Valle Dam and Reservoir, Alameda County, California"

expansion and development are great. It is estimated that the present population in the flood plain area has increased to 14,000 persons and that it will increase to 22,000 by 1975 and to 62,000 by 2000. It is the present occupants, plus any increase in occupancy which is bound to take place even in the absence of the improvements, who will benefit from the damages prevented. With this widespread occupancy, it can hardly be considered that benefits would accrue to a limited number of identifiable interests. The District Engineer cannot agree, therefore, with the narrow interpretation which GAO has placed on the flood-control benefits which del Valle reservoir project will provide. These benefits, which would be comprised almost entirely of damages prevented, will accrue to a sufficiently large number of individuals and diversified interests and developments to fully justify the determination of the Chief of Engineers that the flood-control benefits, used as a basis for reservoir cost allocation, are widespread.

3. Another contention of GAO is that the reservoir serves as a substitute for a portion of the local channel and levee improvements in the coastal plain area. Based on benefits assigned to del Valle reservoir, as contained in interdepartment correspondence with the Board of Engineers but never incorporated in the survey report, GAO considers that since 74 percent of these benefits are in the coastal plain reach; therefore, 74 percent of del Valle reservoir is a substitute for the improvements which otherwise would be required in this reach. The reservoir cannot be considered a substitute, or "in lieu thereof", project but is a necessary part of an overall plan to provide the maximum benefits at minimum costs. The adopted plan was developed in accordance with accepted procedures. Analyses were made for a single-purpose flood-control reservoir, for a multiple-purpose reservoir including flood control for levee and channel improvements alone, and for combinations of reservoir and channel and levee improvements. A single-purpose flood-control reservoir could not be economically justified, and a multiple-purpose reservoir including flood control, even though economically justified, would not provide the desired high degree of protection. Therefore, channel works, also, are required. For cost allocation purposes, the benefits in the coastal

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plain were limited to the difference between the cost of the improvements in the coastal plain which would be required without upstream reservoir control and with upstream reservoir control. The project document refers to this as a "savings in cost"; however, it is actually the measure of the benefit as limited by alternate costs for use in cost allocation procedures.

4. For the multiple-purpose reservoir including flood control, which was one of the plans analysed during preparation of the survey report, flood control benefits consisted almost entirely of flood damages prevented. The remaining flood-control benefits (a few percent) were comprised of added farm income resulting from more intensive agricultural use of the lands. As discussed previously these damage-prevention benefits have been considered to be of a general and widespread nature, therefore, all reservoir costs allocated to flood control would have been apportioned to the Federal Government. The addition of downstream channel and levee improvements should have no bearing on apportionment of reservoir costs allocated to flood control. The GAO report errs when it contends that 74 percent (or any amount, for that matter) of the del Valle reservoir project is a substitute for an otherwise feasible coastal plain project and, further, errs when it attempts to develop an amount of local contribution based on such premise.

5. In its proposed report, GAO makes the statement they determined that if the Corps had found the project benefits were local in nature, the Federal contribution could be reduced by one of several amounts depending upon the method of computation. Without equivocation or qualification, GAO then uses these computed amounts as a basis for its recommendation for requiring a reduction in Federal contribution toward flood control in del Valle reservoir project. It should be apparent that almost any answer can be obtained by making different assumptions as to nature of benefits, or as to methods of calculations. The fact remains, however, that in the judgment of the Corps of Engineers, the flood-control benefits upon which the cost allocations for the reservoir were computed are widespread. There is no basis, therefore, for requiring a

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reduction in the amount of Federal contribution. This office does not concur in the recommendation, as contained in the proposed report of GAO, which would require a contribution from local interests toward the del Valle reservoir project as a condition for Federal contribution.

6. With regard to the second recommendation in the proposed report of GAO relative to identification, in future projects, of recipients to whom substantial benefits will accrue, it is believed that such recommendation is unnecessary. In instances where an appreciable part of the flood-control benefits was in the category of higher land utilization, reviewing officials, including the Bureau of the Budget, have requested on occasion, and have been furnished, supplemental information on ownerships for the purpose of ascertaining whether or not there were any "windfall benefits". It is considered, therefore, that adequate control and review now exists for making the determinations as to whether or not local cooperation over and above that required under existing legislation should be recommended.

/s/ John H. Kern

2 Incl	For temporary	John H. Kern, Major, CE
n/c - Incl 1	absence of	Robert H. Allan
Added - 1 Incl		Lt. Colonel, CE
2. Memo for Record,		District Engineer
22 Jul 65 w/incls		