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Supplemental Requests For Typhoon Damage On Guam and for Other Purposes



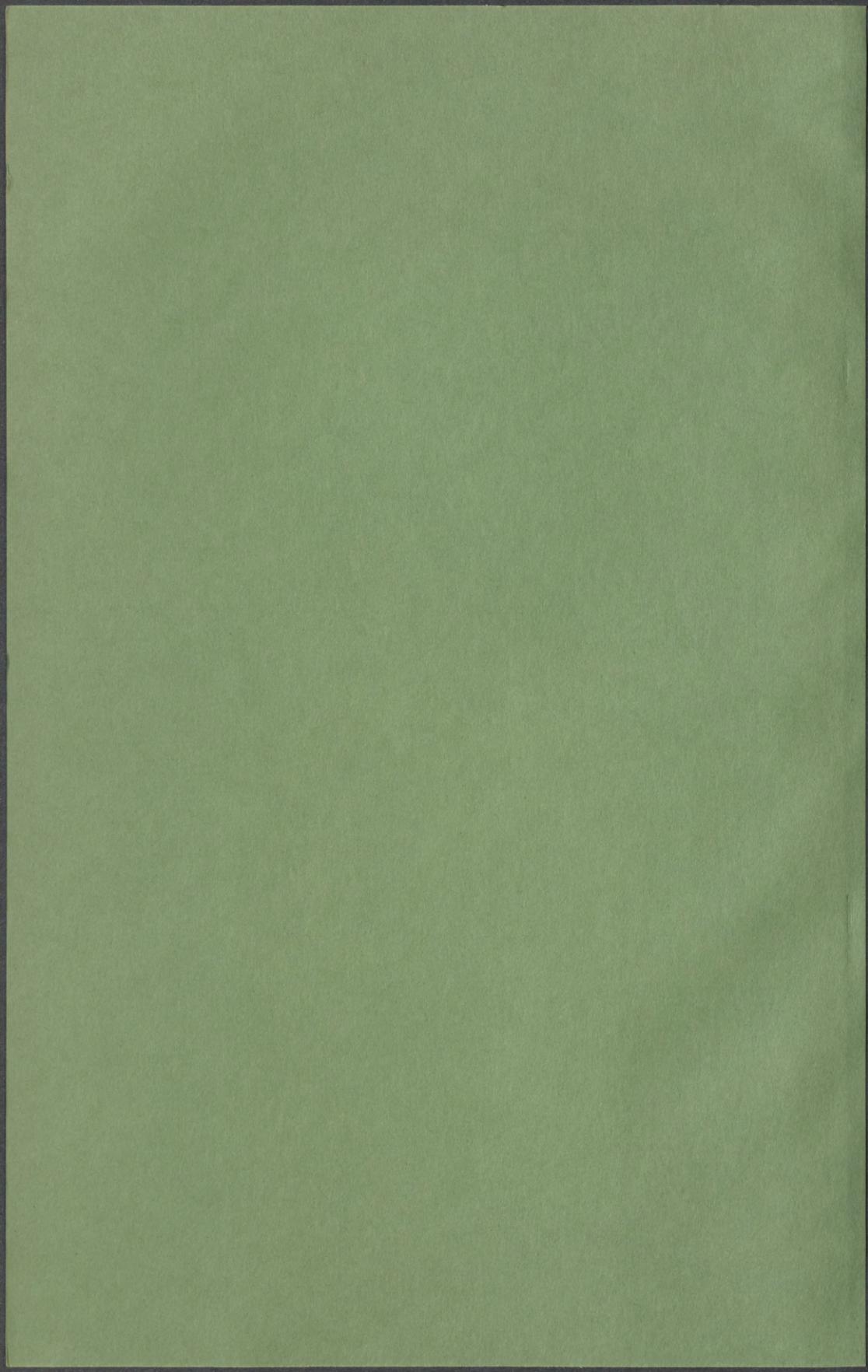
Fiscal Year 1976 and 1977

94th CONGRESS, SECOND SESSION

H.J. Res. 1096

SPECIAL HEARINGS

- TETON DAM FAILURE
- TYPHOON DAMAGE ON GUAM
- U.S. POSTAL SERVICE SUPPLEMENTAL APPROPRIATION



**SUPPLEMENTAL REQUESTS FOR TYPHOON DAMAGE
ON GUAM AND FOR OTHER PURPOSES**

HEARINGS
BEFORE
SUBCOMMITTEES OF THE
COMMITTEE ON APPROPRIATIONS
UNITED STATES SENATE
NINETY-FOURTH CONGRESS

SECOND SESSION

ON

H.J. Res. 1096

JOINT RESOLUTION MAKING SUPPLEMENTAL APPROPRIATIONS FOR THE DEPARTMENT OF DEFENSE FOR THE REPAIR AND REPLACEMENT OF FACILITIES ON GUAM DAMAGED OR DESTROYED BY TYPHOON PAMELA, AND FOR OTHER PURPOSES

Printed for the use of the Committee on Appropriations

DEPARTMENT OF DEFENSE
DEPARTMENT OF THE INTERIOR
U.S. POSTAL SERVICE



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SUPPLEMENTAL REQUESTS FOR TYPHOON DAMAGE ON GUAM AND FOR OTHER PURPOSES

TUESDAY, SEPTEMBER 14, 1976

U.S. SENATE,
SUBCOMMITTEE ON DEPARTMENT OF DEFENSE,
Washington, D.C.

The subcommittee met at 10:03 a.m. in room 1223, Everett McKinley Dirksen Office Building, Hon. John L. McClellan (chairman) presiding; present, Senators McClellan, Young, and Hruska.

DEPARTMENT OF DEFENSE

ASSISTANT SECRETARY OF DEFENSE, COMPTROLLER

STATEMENT OF JOHN R. QUETSCH, DEPUTY ASSISTANT SECRETARY
OF DEFENSE, PROGRAM/BUDGET, OFFICE OF THE ASSISTANT
SECRETARY OF DEFENSE, COMPTROLLER

ACCOMPANIED BY:

FRANK L. McLAUGHLIN, DEPUTY DIRECTOR FOR OPERATIONS,
OFFICE OF THE DEPUTY ASSISTANT SECRETARY FOR DE-
FENSE PROGRAM/BUDGET, OFFICE OF THE ASSISTANT SEC-
RETARY OF DEFENSE, COMPTROLLER

REAR ADM. E. P. TRAVERS, DEPUTY DIRECTOR OF BUDGET
AND REPORTS, NAVY

MAJ. GEN. CHARLES BLANTON, DIRECTOR OF BUDGET, AIR
FORCE

MAJ. BOBBIE MITCHELL, DIRECTORATE OF SPACE, PLANS, AND
TECHNOLOGY DIVISION, OFFICE OF THE DEPUTY CHIEF OF
STAFF, RESEARCH AND DEVELOPMENT, AIR FORCE

ROBERT HENSHAW, DIRECTORATE OF BUDGET, OPERATING
APPROPRIATIONS DIVISION, AIR FORCE

COLONEL WILLIAM MARTIN, STAFF JUDGE ADVOCATE, AIR
FORCE

USE OF OPERATION AND MAINTENANCE FUNDS

Chairman McCLELLAN. The subcommittee this morning is consid-
ering a transition period supplemental request for operation and
maintenance funds to restore typhoon damage on Guam.

Secretary Quetsch, you may proceed.

SUPPLEMENTAL REQUEST

Mr. QUETSCH. The last time I was here we were asking for reprogramming to pay claims associated with the typhoon on Guam. Today we are considering, or you are considering, a supplemental request for the repairs of the damage to the buildings.

So we have taken care of the personal claims of the losses of our people. I have a brief statement which I would like to summarize.

Chairman McCLELLAN. What was your request before?

Mr. QUETSCH. It was a reprogramming, Mr. Chairman.

Chairman McCLELLAN. All right. What are you requesting today?

Mr. QUETSCH. We are asking for a total in the bill of \$189 million, of which \$104.5 million is for military construction, which is being reviewed by a separate committee, but in the same bill.

Chairman McCLELLAN. Is that for repair and reconstruction of damaged facilities?

Mr. QUETSCH. The military construction is; yes, sir.

Chairman McCLELLAN. Are you expanding the facilities some?

Mr. QUETSCH. Well, sir, in some cases we are modernizing.

Chairman McCLELLAN. How much of the money will actually be used for replacement of facilities and how much for expansion or improvement?

RESTORATION AND REPLACEMENT COSTS

Mr. QUETSCH. Well, in both categories, operation and maintenance, where we are repairing, and military construction there is a mixture. I don't have that precise amount, but I can get it for the record, and in addition, there is \$40.4 million for family housing, also on the military construction side.

[The information follows:]

AMOUNTS FOR RESTORATION AND REPLACEMENT OF FACILITIES

The amounts requested are for restoration and replacement of facilities which were damaged or destroyed. While no funds have been requested purely for the purpose of upgrading outmoded structures, some facility improvements will be realized from the restoration effort.

The facilities which were damaged or destroyed had not originally been constructed to a standard which could withstand the forces of the recent storm. Some of these were of temporary or semipermanent construction and some dated back to World War II. These had been constructed to standards and criteria appropriate to the times.

Because of the strategic value of the Guam site, military facilities, now being constructed there are planned for long duration. Consequently, the restoration and replacement effort is being designed to current construction criteria and standards, with appropriate provision for typhoon resistant features to reduce vulnerability to damage of the type sustained during Pamela. This includes such measures as replacing destroyed quonset structures with permanent construction, installation of typhoon resistant doors and windows, and use of heavier than normal reinforcing in exterior walls.

Thus, the improvements to be realized in the restoration effort are a combination of things—stronger than normal structural features, and in some cases, going from outmoded to modern design criteria. The project cost estimates underlying the program estimates submitted to Congress were computed to this requirement. Individual cost estimates relative to precise replacement in kind of these facilities were not developed since it was not considered in the best interests of the Government to design to any lesser standards than those upon which the current estimates are based.

HOUSING FACILITIES

Chairman McCLELLAN. How much housing was destroyed?

Are we building more than we had before?

Mr. QUETSCH. No, sir, we are essentially restoring what we had with some upgrading incident to the replacement, like installing typhoon resistant doors and windows.

Chairman McCLELLAN. You are planning on better quality and more capacity in housing facilities?

Mr. QUETSCH. Not so much capacity for the families, but improvements.

Chairman McCLELLAN. You had housing that would accommodate so many thousands before; you are going to have housing now to accommodate about the same number?

Mr. QUETSCH. It will be for the same number. It will be sounder housing.

Chairman McCLELLAN. All right, you may proceed with your prepared statement.

Mr. QUETSCH. All right.

REQUEST FOR FUNDS

The additional funds requested in the operation and maintenance appropriations which we are discussing today total \$44.1 million, \$30.8 million for "Operation and maintenance, Navy," and \$13.3 million for "Operation and maintenance, Air Force."

As you know, the Typhoon Pamela struck the Island of Guam with winds of 140 knots, and gusts higher than that. Damage was sustained by naval facilities at the naval station, the naval air station, the ship repair facility, the supply depot, the magazine, the communications area, and the medical center, and the Air Force facilities at the Satellite Tracking Station and at Andersen Air Force Base.

The damage was from a number of causes. Direct force of the wind toppled antennas, tore off roofs, blew in windows and so forth. Flying debris severed power and communications lines and did other extensive damage. Rain soaked or washed away furnishings, supplies and equipment, and flooded the buildings. Secondary damage resulted from the extended loss of electrical power.

In addition, 13 Navy service craft were sunk or damaged and required salvage, repair, or scrapping.

Since our initial submission of this request we have continued to refine our estimates as we said we would. This estimate was put together rather quickly by an overworked staff on Guam. We now find that the Navy is able to reduce its estimates by \$3.5 million, related to less expensive modes of transportation of material to Guam.

SUMMARY

In summary, appropriation of \$40.6 million is urgently requested. Both the Navy and Air Force have had to severely suppress approved operations during fiscal year 1976 and the transition quarter, primarily due to inflation throughout the O&M budget, where we cannot budget for inflation. Program reductions, deferrals, and postpone-

ments have already reduced force readiness from our goals, and have reduced maintenance of facilities.

This completes my statement, Mr. Chairman. I have with me General Blanton from the Air Force and Admiral Travers from the Navy, and they are prepared to answer any questions on the details of the request.

DEPARTMENT OF THE NAVY

PREPARED STATEMENT OF REAR ADM. EDWARD P. TRAVERS

Chairman McCLELLAN. Admiral Travers, do you have a prepared statement?

Admiral TRAVERS. Yes.

Chairman McCLELLAN. We will place your statement in the record at this point and you may make any additional comments you like. [The statement follows:]

Mr. Chairman and members of the committee, I appreciate the opportunity to present the Department of the Navy's proposed supplemental request for the appropriation, "Operation and Maintenance, Navy," to cover restoration of facilities on Guam damaged by Typhoon Pamela.

On May 21, 1976, Typhoon Pamela struck the island of Guam with sustained winds to 140 knots and gusts to 170 knots causing extensive, severe wind and water damage to facilities. Funds in the amount of \$27,346,000 are required in the O. & M., N. appropriation to repair and restore these facilities to an adequate operating condition as follows:

A. Funds are required in the amount of \$7,925,000 in budget activity 2 (General Purpose Forces) to repair damages sustained to real property facilities at Naval Station Guam, Naval Air Station, Agana, Naval Ship Repair Facility, Guam, Naval Supply Depot, Guam, and the Naval Magazine, Guam.

B. Funds are required in the amount of \$3,210,000 in budget activity 3 (Intelligence and Communications) to repair extensive typhoon damage to the facilities at the Naval Communications Area Master Station, WESTPAC, which crippled communications operations in the Western Pacific. Restoration of station facilities to an adequate, serviceable condition is required.

C. Funds are required in the amount of \$14,905,000 in budget activity 7 (Central Supply and Maintenance) for repair of severe typhoon damage to Navy installations and facilities as indicated in the following budget programs.

(1) *Sea systems technical support.*—\$243,000 are required in this program to refloat four active fleet craft and to repair other fleet craft.

(2) *Facilities technical support.*—\$10,052,000 are required in this program for the initial outfitting of collateral equipment requirements associated with the military construction supplemental package, plus repair costs of the Public Works Center, Guam, and the Officer in Charge of Construction, Guam.

(3) *Supply support.*—\$4,610,000 are required in this program to cover extraordinary supply system material support, travel costs of household goods claims examiners, and overtime costs of employees at the commissary store, Guam, for typhoon damage cleanup required. In addition, funds are required to cover shipment of material to Guam under the second destination transportation program as required by Navy activities. Our original estimate has been reduced in this area by \$3.5 million due to the utilization of surface vice air transportation as initially planned.

D. \$1,306,000 are required in budget activity 8 (Training, Medical, and Other General Personnel Activities) for recovery costs and structural repairs for the Navy Regional Medical Center (NRMC), Guam. Recovery costs are required for emergency public works services and replacement of medical consumable items water damaged beyond use and structural repair.

Mr. Chairman, this concludes my statement and I am ready to answer any questions you may have.

NAVY REQUEST

Admiral TRAVERS. The only comment I would like to make, sir, is to update Secretary Quetsch's figure on transportation requirements.

The Navy has found that by using Navy ships and materials that were in Subic and so forth, that our savings in transportation are \$5 million instead of \$3.5 million. So our transportation requirements are \$3.1 million instead of the \$8.1 million we initially requested.

Chairman McCLELLAN. Thank you, Admiral Travers. We will now hear from General Blanton.

DEPARTMENT OF THE AIR FORCE

PREPARED STATEMENT OF MAJ. GEN. CHARLES C. BLANTON

Chairman McCLELLAN. General Blanton, do you have a prepared statement?

General BLANTON. Yes, sir.

Chairman McCLELLAN. It will be placed in the record at this point and then you may proceed.

[The statement follows:]

(7)

Mr. Chairman and Members of the Committee:

I appreciate the opportunity to present the Department of the Air Force's Fiscal Year TQ supplemental budget request of \$13.3 million for the Operation and Maintenance, Air Force (O&M) Appropriation. The funds are requested for emergency recovery actions and for the replacement, repair and restoration of facilities, equipment and supplies destroyed or damaged by Typhoon Pamela.

The full force of Typhoon Pamela struck Guam on May 21, 1976, causing millions of dollars in damage to facilities, equipment and personal property, both military and civilian. The storm had maximum winds exceeding 145 knots, with sustained winds greater than 100 knots for seven hours, and rainfall of 22.6 inches.

Damage and destruction resulted from a number of causes. One was the direct force of the wind which toppled antennas, snapped utility poles, overturned vehicles, tore roof and wall panels from prefabricated metal buildings, forced the failure of structural members, sheared roof ventilators, buckled metal roll-up doors, blew in windows and wooden wall panels and blew away furnishings, supplies and equipment. Another was the effect of flying debris which severed power and communication lines, lodged against poles and fences causing a sail effect which buckled them, ripped and gouged roofs, broke windows and chipped and gouged and collapsed building walls and doors. The tremendous amount of wind driven rain then soaked or washed away furnishings, supplies, equipment and personal property, flooded buildings, and shorted out transformers, switches and motors. Major secondary damage resulted from the extended loss of electric power - frozen food spoiled, water could not be pumped from wells to reservoir, and sewage lift station pumps were inoperable.

A summary of the supplemental request by Major Force Program is as follows:

Summary of Requirements by Budget Program
(In Thousands of Dollars)

<u>Title</u>	<u>Presently Available</u>	<u>Revised Estimate</u>	<u>Proposed Supplemental</u>
<u>Direct Program</u>			
Strategic Force	\$ 396,692	\$ 404,892	\$ 8,200
General Purpose Forces	338,391	338,445	54
Intelligence and Communications	151,818	155,733	3,915
Airlift and Sealift	122,833	122,833	-
Central Supply and Maintenance	643,428	644,526	1,098
Training, Medical & Other General Personnel Activities	233,774	233,797	23
Training & Other General Personnel Activities	(168,432)	(168,432)	(-)
Medical	(65,342)	(65,365)	(23)
Administration & Associated Activities	70,177	70,177	-
Support of Other Nations ...	182	182	-
Total Direct Program..	\$1,957,295	\$1,970,585	\$13,290

I will now discuss details of the supplemental requirement by major force program.

STRATEGIC FORCES

\$8.2 million is required for recovery operations and for the repair, replacement and rehabilitation of facilities.

Recovery operations (\$3.4 million) requirements are for special assignment airlift, port handling, augmentation, emergency civilian overhire and overtime, rental of construction equipment for initial recovery operations and for the travel of assistance teams deployed from other bases.

Repair, replacement and rehabilitation requirements (\$4.8 million) are for the supplies needed to make repairs, the replacement of dormitory furnishings and other equipment destroyed, and for the contractual repair of facilities and equipment.

GENERAL PURPOSE FORCES

\$54,000 is required for the temporary deployment of Air Force personnel from other bases to assist in the recovery efforts on Guam.

INTELLIGENCE AND COMMUNICATIONS

\$3.9 million is required to repair a severely damaged satellite telemetry, tracking and commanding facility. The facility is an important link in a worldwide system which supports a number of satellite programs for the Department of Defense, NASA, and the United Kingdom and NATO.

CENTRAL SUPPLY AND MAINTENANCE

\$1.1 million is requested for the transportation of approximately 2,000 short tons of supplies and equipment urgently needed for initial recovery efforts and for the replacement of lost or damaged items. The shipments were delivered by aircraft of the Military Airlift Command.

MEDICAL

\$23,000 is requested for the repair of facilities at the Andersen AFB Clinic and for the repair of vehicles and the replacement of medical supplies.

SUMMARY

Approval of the supplemental is urgently requested because of the serious shortage of FY 76/TQ O&M funds.

The Air Force has severely suppressed O&M funded operations in both FY 76 and TQ due to both Congressional reductions and inflation. The Congress reduced the Air Force's FY 76 O&M request by \$499 million, of this total, \$190 million was not related to specific program reductions. In addition, inflation has effectively reduced FY 76 funds by another \$300 million. Further, the Air Force has had to absorb the unbudgeted costs (\$44 million) for withdrawal from Thailand.

The impact of the shortage of FY 76 funds on the depot maintenance of exchangeables and the resultant impact on our aircraft operations as a result of an increase in NORS (Not Operationally Ready - Supply) incidents is depicted in the following table:

	<u>Exchangeables Backlog</u> (\$ Millions)		
	<u>FY 74</u>	<u>FY 75</u>	<u>FY 76</u>
Backlog (\$)	\$ 14	\$ 40	\$ 101
NORS Incidents (000)	334	437	477
How Satisfied: (000)			
Depot	(149)	(203)	(207)
Cannibalization	(68)	(88)	(93)
Lateral Support	(22)	(28)	(30)
WRM	(95)	(118)	(147)
Value of the Backlog(\$)	\$ 84	\$240	\$606

AIR FORCE REQUEST

General BLANTON. Being heard before a separate committee, our construction requirements originally when they came in were some \$78 million, and that includes family housing. Before we sent them to Congress, we were able to scrub them down to a total of \$49 million, getting things out which did include enhancements to buildings and to quarters we did not feel were appropriate. We scrubbed that out of our original request.

OPERATION AND MAINTENANCE REQUEST

Of our O. & M. request of \$13.3 million before the committee today, there are small changes in the totals, but the overall requirement is still valid. We still need the \$13.3 million, Mr. Chairman, to cover our costs.

Senator YOUNG. Does this require authorization?

General BLANTON. No, sir, it does not.

Senator YOUNG. None of the funds you are requesting requires authorization?

Mr. QUETSCH. The construction funds do, but not the O. & M. funds.

DAMAGE COMPARISON TO EARLIER TYPHOON

Senator HRUSKA. In 1962 you had a typhoon of substantial degree. What was the name of that, do you remember?

Admiral TRAVERS. Typhoon Karen.

Senator HRUSKA. On that occasion, the buildings that had been of recent construction then at Andersen Air Force Base were brick and they were designed to withstand the rigors of a physical phenomenon like that.

How did they stand up in this instance, because the buildings that were torn down were all frame construction as I remember.

General BLANTON. That is correct, sir, and again what we are asking for here in the construction bill is to build facilities that will withstand future typhoons like this, to go back to the concrete building, get rid of louvers on family housing and put steel windows in, so we can keep from having the damage that we have in housing at this particular time.

Senator HRUSKA. Well, those that had been built prior to 1963, did they withstand this?

General BLANTON. No; a lot of your temporary buildings—

Senator HRUSKA. No; these were not temporary. These were either concrete or brick.

General BLANTON. The concrete buildings withstood very well.

Senator HRUSKA. You mean the roofs and windows?

General BLANTON. Yes, sir. It is where you have large objects sticking up in the air, such as antennae. We have a satellite tracking station on Guam which has a 60-foot radar dish, which was blown down in the storm. It is one of the things we are repairing here.

Senator HRUSKA. That is different.

General BLANTON. But the concrete buildings themselves withstood it very, very well.

Senator HRUSKA. Well, in 1962 there was virtual destruction of the naval repair facilities down below, and the man in charge said it was a blessing because we had been trying to get appropriations to replace the things for many years, and they were jerry built. He showed me pictures of them. And so those had apparently been replaced.

Are those the same ones that were damaged this time?

General BLANTON. On the Navy side, I'll have to ask Admiral Travers.

DAMAGE TO NAVAL STATION

Admiral TRAVERS. No, sir, there was some damage to the naval station, damage to the piers, to the craft that were there, to the floating drydocks that were tied up, and some of the buildings. In general, the damage to the post-Karen buildings, those that were built to be typhoon proof was minimal.

FAMILY HOUSING

Senator HRUSKA. What about the family housing?

Admiral TRAVERS. In general, family housing units are typhoon proof buildings. Damage was mainly to doors, windows, and outer damage.

Senator HRUSKA. The other buildings, the depots, the warehouses, and the machine shops and things like that?

Admiral TRAVERS. Well, the after-action report by Admiral Carroll on Guam states that we must pay additional attention to construction criteria in typhoon-proof buildings because we did suffer some damage to them, and he does go on to emphasize the importance of typhoon-proof buildings in Guam because of the consistency of storms passing over.

Senator HRUSKA. You had 140-knot wind and 170 gusts. How does that compare with the one in 1962?

General BLANTON. I am told, sir, that it was of much shorter duration in 1962, and the winds were less. This storm lasted over 24 hours, and it just kept beating the people to death during that time. After it blew windows out, it continued to rain and soaked all of the furniture and equipment. It was just a very demoralizing, damaging storm.

RECORD OF TYPHOONS BETWEEN 1962 AND 1975

Senator HRUSKA. Have there been any typhoons between 1962 and 1975?

General BLANTON. Not of that size.

Senator HRUSKA. Of any great degree?

General BLANTON. Not of that size. I am told from the record in the Military Construction Subcommittee before Mr. Sikes in the House that the 1962 storm only did about 6 million dollars' worth of damage to the Air Force. It was of a much smaller scale, and a lot less intensity and duration which I think really caused the damage in this case. Once windows were blown out, rain caused additional damages to interiors of the buildings as well. It was a real tough storm.

Senator HRUSKA. I recall the report was the warnings were sufficiently in advance, whatever was flyable, they flew away. However,

those that they couldn't get off the ground, they never found again, just completely disappeared.

General BLANTON. That is correct.

Senator HRUSKA. Thank you, Mr. Chairman.

QUESTIONS SUBMITTED BY CHAIRMAN MC CLELLAN

Chairman McCLELLAN. I have additional questions for Secretary Quetsch, Admiral Travers, and General Blanton which I would like to have answered for the record.

[The questions and answers follow:]

OBLIGATION OF FUNDS

Chairman McCLELLAN. Mr. Secretary, how long would the Department have to obligate the funds, if they should be appropriated in accordance with your request?

Mr. QUETSCH. We would have until September 30, 1976.

Chairman McCLELLAN. By law, wouldn't these funds expire on September 30, 1976?

Mr. QUETSCH. Yes. The transition period ends on September 30, 1976, for obligational purposes.

Chairman McCLELLAN. How would you be able to obligate these funds prior to that date?

Mr. QUETSCH. The necessary paperwork is completed for immediate obligation pending the availability of funds.

Chairman McCLELLAN. Describe in detail how much of the requested funds have already been obligated and for what purpose.

Mr. QUETSCH. As of August 31, 1976, the Navy has obligated \$10.9 million and the Air Force \$7.7 million, for a total of \$18.6 million. The funds have been obligated for the following purposes:

	<i>Thousands</i>
For the Navy:	
General purpose forces.....	\$3, 121
Intelligence and communications.....	872
Naval sea system command technical support.....	243
Naval facilities systems command technical support.....	3, 863
Supply support.....	2, 505
Medical support.....	286
Total Operation and maintenance, Navy obligations.....	<u>10, 890</u>
For the Air Force:	
Civilian overhires and overtime.....	758
Temporary duty travel.....	53
Special assignment airlift.....	3, 552
Rental of vehicles and construction equipment.....	227
Temporary, partial repair of satellite tracking station.....	535
Emergency repair of facilities, vehicles and equipment.....	919
Supplies and equipment.....	<u>1, 705</u>
Total, Operation and maintenance, Air Force obligations.....	7, 749

FUNDING SOURCES USED

Chairman McCLELLAN. What funding sources were used for obligations made to date for which funds are now being requested?

Mr. QUETSCH. Obligations to date were funded by deferring programs.

Chairman McCLELLAN. For each item where funds are now being requested but which have already been obligated, indicate what items in the operation and maintenance fiscal year 1976 appropriation (or fiscal year 1977 appropriation) were deferred in order to make these funds available.

Mr. QUETSCH. In the case of the Air Force, the necessary funds were obtained by deferring real property maintenance projects. The following list is illustrative of the types of Air Force projects which are being deferred:

<i>Base and project</i>	<i>Thousands</i>
Plattsburg, roofs repairs.....	\$194
Fairchild, replace siding.....	165
F. E. Warren, replace cold storage equipment.....	171
Minot, coat inside of POL tanks.....	120
Fairchild, replace siding and windows.....	87
K. I. Sawyer, alter fire alarm system.....	48
Griffiss, repair soot floor.....	284
Griffiss, replace spray booths.....	75
Barksdale, replace water pipes.....	199
Barksdale, cathodic protection/water tanks.....	145
Barksdale, replace storm drainage.....	199
Beale, reroof buildings.....	181
Vandenberg, replace insulator/conductors.....	143

In the case of the Navy, general purpose forces requirements (\$3,121,000) were funded by withholding supplies and equipment on PACFLT ships. Intelligence and communications requirements (\$872,000) were funded by slippage of one-half month's rent of Gapfiller Satellite and communications supplies and materials. NAVSEA technical support (\$243,000) was funded by deferral of planned rework of F-14 components, search radar, and other ship support components maintenance support and approximately 15 small programs such as calibration, ground support equipment rework, and training equipment maintenance.

IMPACT OF DEFERRING ITEMS

Chairman McCLELLAN. For all those items identified in answer to the above question, what would be the impact of simply deferring those items until fiscal year 1977. Please be specific in your response.

Mr. QUETSCH. The fiscal year 1977 program does not provide for inflation. Therefore, actual requirements are underfunded. To absorb these additional requirements would mean additional deferrals of maintenance and less combat readiness. Therefore, the net result would be a significant reduction in force readiness.

NAVY AND AIR FORCE O. & M. REQUESTS

Chairman McCLELLAN. For both the Navy and Air Force operation and maintenance requests, please break down the object class 25 request and discuss what specifically is being purchased with the requested funds.

Mr. QUETSCH. The Air Force is requesting \$4,535,000 under "Object class 25; Other services."

\$500,000 is for the repairs required to attain interim operational capability of the satellite telemetry, tracking, and commanding facility. The repairs will temporarily replace the destroyed antenna feed with a 14-foot spaceground link system (SGLS) antenna feed. Operational capability will be partially restored.

\$3,250,000 is required as a result of extensive damage to the satellite tracking station on Guam, including irreparable damage to the antenna feed of the 60-foot antenna system, severe damage to the radome which encircles the antenna system, and to peripheral antenna equipment. The 110-foot radome (which was stressed for 150 miles per hour winds) was blown from its pedestal, damaging the antenna and technical buildings. The antenna wave guide and multi-purpose feed were destroyed. Most of the antenna panels were loosened, punctured, or blown away. Falling radome panels destroyed an air-conditioning condenser unit. Water flooded the area under the false flooring in the technical room causing corrosion to underfloor cables. The microwave reflector and tower were blown down and the microwave transmitter severely damaged. The funds will provide for the repair of the technical equipment including transportation from the CONUS and installation costs.

\$785,000 is required for the following:

(a) *Civil engineer services (\$374,000)*

Repair of air-conditioning, refrigeration systems, and utility systems. Air-conditioning includes the data processing equipment building, quarters, and

offices. Refrigeration repairs are for the commissary, mess halls, and food service areas. Electrical repairs are required in all areas including sanitary servicing of sewer lines and water lines. In addition, repair of generators, compressors, transformers are required.

(b) *Facility projects (\$229,000)*

These items are of an emergency nature to repair/replace security fencing, repair doors, windows, locks, roofs, et cetera. Also, repair of nose docks as well as seal up of the radia station is required.

(c) *Contract maintenance (\$140,000)*

This includes repair of vehicles beyond in-house capability, that is, complete transmission overhauling, axle work, replacing of windshield, windows, headlights and painting of vehicles. It also includes repair of office furniture that was damaged but not completely destroyed, that is, backs of chairs missing, mirrors broken, scratches or gouges in wood from flying debris, et cetera.

(d) *Other equipment (\$42,000)*

Includes contract maintenance of items such as reproducing equipment, calculators, typewriters and flight line equipment.

In the case of the Navy, with the exception of second destination transportation, travel funds and personnel costs, the balance of the requested amounts is in object class 25 since purchases will be transacted through the Navy Industrial Fund in Guam.

HIRING OF ADDITIONAL PERSONNEL

Chairman McCLELLAN. For each appropriation, how many additional personnel will be hired on either a full or part time basis?

Mr. QUETSCH. No additional personnel will be hired. Of the 400 temporary personnel hired by the Navy to satisfy civilian requirements funded by the Federal Disaster Assistance Agency, approximately 197 are still on the rolls. For O. & M., Air Force 138 temporary civilian personnel have been hired to assist in recovery operations. The personnel were used primarily in the civil engineering function to help reconstruct power lines, reestablish utility service and conduct emergency repairs. Included in the total are 21 personnel used in the Air Force commissary to restock shelves and clean up debris.

REPROGRAMING ACTIONS

Chairman McCLELLAN. Please provide for the record a list of all fiscal year 1976 and fiscal year 1977 reprogramming actions that have been denied or only partially approved. Indicate the amounts requested but not approved, and explain the availability of these funds to offset supplemental requirements should the committee desire to transfer these funds.

Mr. QUETSCH. The information follows:

For the Air Force

The fiscal year 1976 and 1977 Air Force reprogramming information is as follows:

Missile Procurement, Air Force, Fiscal Year 1976

\$13 million to be reprogramed from AGM-65A Maverick fiscal year 1976, 3020 funds to DSCS fiscal year 1976 program:

Reprogramming was denied by the Senate Armed Services Committee April 13, 1976 on the basis that the fiscal year 1976 Maverick missile funds will be used as financing for the fiscal year 1977 Air Force missile program (initial buy of 100 laser Mavericks.) The DOD Appropriation Act 1977 transferred the funds to the "Missile Procurement, Air Force" appropriation for fiscal year 1977. \$13.7 million to be reprogramed from Maverick fiscal year 1976, 3020 funds to "Other Procurement" (3080):

Reprogramming denied for same reason as above and funds were transferred to "Missile Procurement, Air Force," fiscal year 1977 by the DOD Appropriation Act, 1977.

Other Procurement, Air Force, Fiscal Year 1976

\$17.1 million for selected activities :

OTHER PROCUREMENT, AIR FORCE, FISCAL YEAR 1976

[In millions of dollars]

Fiscal year	Requested	Approved	Difference
Reprogramming for selected activities:			
1976.....	12.7	11.4	-1.3
197T.....	4.4	4.0	-.4
Total.....	17.1	15.4	-1.7

The \$1.7 million reprogramming denied by Congress has been used to cover price increases in other priority programs and is not available for other reprogramming requirements.

*Military Personnel and Operation and Maintenance, Air Force,
Fiscal Year 1976*

The only Air Force fiscal year 1976/7T reprogramming denied by Congress in the "Operation and Maintenance" appropriation was for reprogramming civilians and military end strengths into the aerial port functions (No. 76-36PA, 26 April 1976). No funds were involved.

For the Navy

The following list applies :

Request	Amount	Description	Availability
76-13.....	\$9,700,000, Aircraft Procurement, Navy.	COD advance procurement.....	Not available; utilized for other air requirements.
76-21.....	\$2,500,000, Shipbuilding and Conversion, Navy.	Sea control ship.....	Not available; required to offset cost growth in other Shipbuilding and Conversion, Navy, programs.
76-41.....	\$6,100,000, Military Personnel, Navy and Marine Corps.	Recruiting and advertising.....	Currently available.

For the Army

1. 76-39 Congress denied the use of \$5.9 million for the MAG-58 machine gun. Funds will be applied to procure additional, urgent required missiles spares and repair parts and finance cost increases to the missile modification programs.

2. 76-19 Congress denied the use of \$2.7 million for procurement of additional air-conditioners because Congress considered the "give up line" chemical agent alarms to be a higher priority. The Army will use these funds for the higher priority chemical agent alarms.

3. 76-38 Recruiting (\$10.0 million O. & M. A. \$2.7 million MPA)—Since final action has not been taken by Congress, funds to support this reprogramming are pending. However, if released the Army plans to obligate the MPA money for increases in pay and allowances of enlisted personnel. Those OMA funds which are no longer required to support this reprogramming action will be applied to hard requirements which otherwise would not be funded.

4. 76-14 Congress denied MPA reprogramming request for \$16.662 million in fiscal year 1976 and \$3.345 million in fiscal year 197T and withdrew these funds for specific application against the fiscal year 1976/T pay raise supplemental request. There are no denied funds available from this reprogramming action.

CURRENT CONDITION OF MILITARY FACILITIES

Chairman McCLELLAN. Please describe the current condition of military facilities in Guam. To what extent has typhoon damage already been repaired, either partially or in total.

Mr. QUETSCH. In the case of the Navy facilities, emergency repairs have been effected to put facilities into minimal operation, provide health and safety, and to prevent further damage from rain. However, windows are boarded up, great deal left to be done. Extensive repair is still required both from the standpoint of habitability and operational effectiveness.

In the case of the Air force facilities, the damage to Andersen Air Force Base and the Satellite Tracking Station on Guam resulted from winds exceeding 145 knots and rainfall of 22.6 inches. Damage and destruction resulted from a number of causes. One was the direct force of the wind which toppled antennas, snapped utility poles, overturned vehicles, tore roof and wall panels from prefabricated metal buildings, forced the failure of structural members, sheared roof ventilators, buckled metal rollup doors, blew in windows and wooden wall panels, and blew away furnishings, supplies, and equipment. Another was the effect of flying debris, which severed power and communication lines, lodged against poles and fences causing a sail effect which buckled them, ripped and gouged roofs, broke windows and chipped, gouged, and collapsed building walls and doors. The tremendous amount of wind-driven rain then soaked or washed away furnishings, supplies, equipment, and personnel property, flooded buildings, and shorted out transformers, switches, and motors. Major secondary damage resulted from the extended loss of electric power—frozen food spoiled, water could not be pumped from wells to reservoir, and sewage lift station pumps were inoperable.

Since the typhoon, only minor work of an emergency nature has been accomplished to restore the base to normal operating condition. Electrical power has been restored on a temporary basis, and the temporary nature of the repair is subject to outages and susceptible to storm activity. Temporary patching has been done on roofs but leaks continue and cause damage. Aircraft navigation aids are being provided on a makeshift arrangement and are unsatisfactory for continued operations. Major work is required immediately on the POL system to prevent further degradation due to the elements and inactivity. Louvers in offices and living quarters remain boarded up and much interior refurbishing must be done. Supplies, equipment, and dormitory furnishings to replace those irreparably damaged, destroyed, or lost in the storm, have been ordered from the stock fund. The Satellite Tracking Station has been temporarily repaired and partially restored. Permanent and complete restoration will require 12 to 18 months.

STATUS OF FUNDS IN EARLIER REPROGRAMING

Chairman McCLELLAN. The committee approved a reprogramming of \$12.6 million on June 30, 1976, for claims as a result of the typhoon. What is the status of those funds? Will all be utilized for claims, assuming the House Appropriations Committee also approves the reprogramming?

Mr. QUETSCH. On September 16, 1976, the House Appropriations Committee approved the reprogramming in the amount of \$9.1 million. All of these funds will be utilized for claims.

REQUESTED FUNDS

Chairman McCLELLAN. For each force program where funds are requested, indicate how much has already been obligated and expended.

Admiral TRAVERS. \$10.9 million of the requested funds have already been obligated. A breakdown is as follows:

	<i>Thousands</i>
General purpose forces.....	\$3, 121
Intelligence and communications.....	872
NAVSEA technical support.....	243
NAVFAC technical support.....	3, 863
Supply support.....	2, 505
Medical support.....	286
Total	10, 890

FUNDS BREAKDOWN

Chairman McCLELLAN. Break down the funds requested in each force program and detail the specific uses these funds are for. The statement describes them in general, but does not provide a specific dollar breakdown, which is needed.

Admiral TRAVERS. The information follows:

	<i>Thousands</i>
General purpose forces:	
Minor repair projects-----	\$2,350
Major repair projects-----	3,550
Base OPS—labor costs, supplies, equipment and minor equipment repair-----	561
RA/TA to sunk or damaged craft, overtime-----	1,447
Temporary hires, and light salvage-----	17
 Total, general purpose forces-----	 7,925
Intelligence and communications-----	1,972
Central supply and maintenance-----	11,620
NAVSEA tech support-----	243
NAVFAC tech support:	
OICC Pac Div-----	100
PWC Guam button up and dig out-----	796
PWC plant account-----	7,371
Subtotal-----	8,267
Supply support:	
Supply support/commissary-----	81
Household goods examiner-----	29
Second destination transportation-----	3,000
Subtotal-----	3,110
Medical support-----	1,306
Total requested-----	22,823

DAMAGE TO WESTPAC STATION

Chairman McCLELLAN. Describe the specific damage to the WESTPAC communications area master station. Is this station now operating? How were the damages restored?

Admiral TRAVERS. Of the 85 buildings at NAVCAMS WESTPAC, 2 were damaged so extensively as to require reconstruction; 8 operational buildings received damage to roofs, doors, vents, and air-conditioning condensers and ductwork; and 34 support buildings sustained miscellaneous damage, including roofs, windows, and doors. The majority of damage to buildings resulted from penetration of torrential rainfall driven by typhoon winds. Wind-blown water cascaded through openings around roof vents, intake air openings, and muffler exhaust pipes. Air handlers, heat exchangers, and other roof-mounted equipment received extensive damage from windborne debris. Certain buildings were not completely sealed against water penetration due to additions to buildings where concrete block was used. Also, most doors proved to be inadequate in preventing water penetration. The ventilation ducting systems allowed large amounts of water to enter the buildings when the external wind velocity exceeded the exhaust air velocity. The impact was magnified when exhaust fans, ducts, and vents were blown away.

Existing electrical power systems failed due to exposed switch gear not being weather-proofed. Power service to certain support facilities was lost due to downed lines. SATCOM generators, by virtue of their design, could not be started due to wind-driven rain. The means were not available to facilitate the drying-out process required for more immediate restoral of electrical services.

Eighty percent of the existing antennas were damaged to such a degree as to be removed from service use. RLPAs were especially vulnerable; all 19 were destroyed. Usable antenna assets remaining after the storm were limited to 1 LF, 15 conical monopoles, and 7 inverted cones. Complete replacement of 31 antennas (26 omnidirectional and 5 HTOA) is required, as well as repairs to a majority

of the others. Replacement of the transmitter antennas has been included in the supplemental request under the "Military construction" appropriation.

The O. & M.N. supplemental request is required in fiscal year 197T to commence repairs to buildings, especially roof repairs, as early as possible, to alleviate further deterioration of facilities.

NAVCMAS WESTPAC's actions in preparation for Pamela effectively transferred all circuitry and communications responsibility to the other stations. These actions prevented the disruption of communication service to the fleet during the storm. Storm damage to facilities crippled the station's ability to fully resume operation in the aftermath of the storm.

In order to restore a minimum essential operation, the station acted immediately to clear debris and restore water power and other life support facilities. Specific problems are assessed below:

(1) *Buildings*.—Because the majority of buildings are constructed as permanent facilities, very limited structural damage was incurred.

The preponderance of damage to buildings consisted of water damage to interiors and the wind damage to exterior components of air-conditioning systems. Loss of roofing and the intrusion of water through all doors, windows, and vents severely damaged interiors and rendered portions of the station C/E equipment temporarily unusable. High humidity and the temporary loss of environmental control systems delayed the reactivation of the ASC and the NAVCOMPARS.

(2) *Antennas*.—The principal item affecting communication capability was the damage to rotatable log periodic antennas (RLPA's). This loss of directional capability currently limits the station's ability to respond to crisis situations and to fully support the fleet. Actions taken by CNTC to alleviate this condition include:

1. Immediate shipment of two RLPA's to Guam.
2. Conclusion of planning for ultimate configuration of antenna fields.
3. Funding repair parts and components for RLPA's.

Severe damage was sustained by all open wire transmission lines serving older antennas. This damage restricted immediate restoral of communication but was readily repairable.

(3) *Power*.—Emergency power units were not adequately shielded from the storm and unprotected from the intrusion of water. In addition, all overhead power lines were subjected to severe damage. Components of virtually all active emergency power facilities at NAVCMAS WESTPAC were installed on concrete pads outside of the operational facility they served. At Finegayan, the MUSE unit services the communications center, and the ASC functioned, but power could not be delivered to the load because of wind and water damage to a transformer. The generators at the SATCOM terminal building were mounted on exterior pads and could not be started due to wind-driven rain. The two 2,000-kilowatt generators were inoperable due to the underground intrusion of typhoon water in the switchgear. In all cases, the power systems did not work when needed.

OVERTIME COSTS

Chairman McCLELLAN. How much is requested for overtime costs of employees at the commissary store in Guam for typhoon damage cleanup?

Admiral TRAVERS. The amount requested for employee overtime costs for commissary store, Guam, typhoon damage cleanup is \$6,445.

O. & M. DEPOT MAINTENANCE PROGRAM

Chairman McCLELLAN. What is the total fiscal year 1976 and 197T O. & M. financed program of depot maintenance split into its component parts? Through the end of August, how much had been obligated against the total program? Explain why (if) you intend to obligate the full amount appropriated and how this will be accomplished during the last month of the fiscal year.

Admiral TRAVERS. The information follows:

Ship maintenance program—depot maintenance (includes overhauls (active) alterations, RA/TA's):	<i>Millions</i>
Fiscal year 1976 program-----	\$1,907.9
Obligated as of Aug. 31-----	1,907.2
Fiscal year transition quarter-----	31.5
Obligated as of July 31-----	8.4

In the ship maintenance TQ program there are seven ships scheduled for overhaul starts in September. The unobligated funds are committed for these overhauls but have not been priced up in the August 31 report.

The TQ aircraft and other depot maintenance programs are scheduled for obligation by Naval Industrial Fund according to their plans for the last 2 months of the period.

NAVY FISCAL YEAR 1976/7T O. & M. APPROPRIATION/OBLIGATION

Chairman McCLELLAN. What is the total appropriated for Navy O. & M. in fiscal year 1976 and 197T? How much had been obligated at the end of each month, June through August 1976? Do you expect to be able to obligate all of the appropriated funds by the end of September, if not, how much would be available to offset these supplemental requirements?

Admiral TRAVERS. The information follows:

	<i>Millions</i>
Total appropriated fiscal year 1976-----	\$8,299.8
Obligations through June-----	8,239.6
Unobligated -----	60.2
Total appropriated for fiscal year 197T ¹ -----	2,267.7
Obligations through July-----	996.9
Unobligated -----	1,270.8
August obligations-----	(2)

¹ Includes 60.2 fiscal year 1976 unobligated carryover.

² Not available.

Navy would expect to obligate all except that necessary to insure no over-obligation occurs within the appropriation. None of these funds would be available to offset supplemental requirements.

FISCAL YEAR 1976/7T BUDGETED VERSUS ACTUAL MAN-YEARS

Chairman McCLELLAN. Compare the Navy's budgeted fiscal year 1976 and 197T man-years—as approved by the Congress in the basic and supplemental appropriations acts—with the actual man-years now estimated in fiscal year 1976 and 197T. Indicate the dollar value of the differences, if there are any. Why can't these funds be used to offset some of the supplemental requirements?

Admiral TRAVERS. The information follows:

	Direct hire (man-years)	Amount (thousands)
Fiscal year 1976 President's budget-----	121,936	\$1,805,598
Actual-----	123,339	1,809,059
Difference-----	+1,403	+3,461
Fiscal year transition quarter of 1977 President's budget-----	30,275	460,098
Fiscal year transition quarter of fiscal year 1978 NCB Budget Plan (not actuals)-----	30,198	47,077
Difference-----	-77	-3,021

The TQ figures are through July 31. The unobligated balance will be obligated prior to September 30, 1976, and thus not available to offset supplemental requirements.

FUNDS OBLIGATED AND EXPENDED AIR FORCE PROGRAM

Chairman McCLELLAN. For each force program where funds are requested, indicate how much has already been obligated and expended.

General BLANTON. Of the \$13,290,000 that has been requested \$7,749,000 has been obligated, broken down by force program as follows:

	<i>Thousands</i>
Strategic forces-----	\$5,529
General purpose forces-----	17
Intelligence and communications-----	535
Central supply and maintenance-----	1,658
Training, medical and other-----	-----
General personnel activities-----	10
Total -----	7,749

BREAKDOWN REQUEST IN EACH FORCE PROGRAM

Chairman McCLELLAN. Break down the request in each force program and detail the specific uses that these funds are for. Your statement describes them in general, but does not provide a specific dollar breakdown.

General BLANTON. The information by major force program is as follows:

Strategic Forces: (\$ Thousands)
\$8,200

a. Recovery Operations (\$3,389)

1. Special Assignment Airlift \$2,020

Twelve (12) C-5 and fourteen (14) C-141 special airlift missions have been flown to transport (and in some cases, return) supplies and equipment urgently required in Guam to recover from the typhoon and reestablish essential operations at Andersen AB.

Supplies and equipment transported include mobile ground control approach (GCA) equipment, vehicles, reefers, generators, compressors, transformers, cranes, lumber, plywood, charcoal, and a UNIVAC 1050-II computer (the computer was needed for interim operational support and has already been returned to the CONUS).

2. Port Handling (emergency augmentation of normal port handling requirements) \$ 400

In addition to costs per M/T, the stevedoring and related charges, i.e., additional personnel costs, overtime, additional equipment costs, are billed as separate items for reimbursement by the Air Force. The request is based on requirements for emergency handling of 28,922 measurement tons of vehicles, equipment and supplies plus stevedoring and related charges.

3. Civilian Personnel \$ 691

This requirement is for the hiring of 138 overhire personnel plus overtime required for these personnel as well as permanent-party type civilians, i.e., transportation, maintenance, roads and grounds, electricians, plumbers and other civil engineering personnel, etc.

a. The Civil Engineers have overhired 111 personnel to accelerate recovery operations and to supplement in-house labor forces in reconstruction of power lines and

other utility services, emergency repair and to eliminate public hazards.

b. Billeting has overhired six personnel to support reopening Andersen South for families displaced from military family housing since many quarters were damaged beyond useful occupancy.

c. The commissary has overhired 21 personnel to restock shelves, augment checkers and clean up debris. Substantial food stuff was contaminated in the store, and required restocking from warehouses not damaged. All of the above personnel were hired for 120 to 180 days at an hourly rate between \$4.50 and \$5.25 per hour.

4. Equipment Rental \$ 235

Includes costs of renting backhoes, dump trucks, pay loaders, bulldozers, augers, six-ton cranes, and freezer vans, which were required to temporarily replace or augment government vehicles/equipment in the clean-up and recovery operation.

Backhoes were needed in order to get to damaged underground cables, pipes, sewerlines, etc., to restore essential utility services and preclude unsanitary conditions and epidemics.

The dump trucks were utilized to help the in-house forces clear areas of debris, trees, buildings, etc. Many of the government trucks were inoperable immediately after the storm and therefore rental was necessary.

Pay loaders and bulldozers were utilized to help clear damaged areas and load dump trucks, specifically in runway and street areas.

The six-ton crane was utilized to obtain access to high reach areas as well as help strip skins off of some destroyed buildings to be utilized on other buildings that could be repaired.

The freezer vans were necessary in support of the commissary to maintain refrigeration for meats and other perishables removed from damaged/destroyed facilities.

5. Travel \$ 43

Specialists in selected skills were airlifted to Guam to assist in recovery operations, to restore utilities and preclude further damage and possible looting of vacated facilities. Temporary duty was for 30 to 60 days. Type of specialists included:

- Security Police
- Electricians
- Refrigerator Specialists
- Cooks
- Carpenters
- Plumbers
- Roofing/Maintenance
- Transportation

b. Repair, Replacement and Rehabilitation

1. Supplies \$ 2,546

Civil Engineer (\$1,950)

Repair/replace damaged base buildings, utility systems, fuel systems, etc. Virtually every base building suffered extensive water damage. The wind and flying debris destroyed or damaged many windows, louvers, and screens. Metal roofs and siding were blown off of many buildings. Utility poles were blown over and power lines damaged or destroyed. Some of the first requisitions placed after the typhoon were for large amounts of plywood, plexiglass, screen, utility poles, and electrical wire.

Loss/damage of CE bench stock - many items were rendered useless because of water damage, many other small, light items were simply blown away. The majority of the requirements are in the electrical area; i.e., switches, cables, piping as well as transformers and air conditioner repairs. Many of these items, although not physically damaged

by the typhoon, are corroded and rusted due to high heat and humidity after sustaining water damage.

Transportation (\$126)

This area lost bench stock inventories which were rendered useless due to water damage. Also, the majority of the vehicles sustained broken windows, windshields, taillights, etc., as well as joint damage from wind, hail, sand and flying debris.

Security Police (\$28)

Many personnel lost special organizational clothing which is issued to them but remains government property. Non-TAC radios, an alarm system, and administrative supplies were also lost.

Morale, Recreation, and Welfare (\$242)

Damage resulted in areas including central warehouse supplies, library supplies, bowling lanes, auto hobby shop, wood shop and gymnasium. Loss resulted when materials were destroyed by exposure to water soaking and disappearance due to the high winds.

All Other (\$200)

This estimate is for lost administrative supplies, food service supplies and other base support supplies.

Many emergency type items had to be utilized; examples of these are:

10,000 10 lb bags of charcoal
 4,300 cans of lighter fluid
 500 cases of paper plates
 75 cases of plastic spoons
 200 cases of plastic forks
 100 cases of plastic knives
 500 cases of paper napkins
 400 cases of hot cups

Above items were utilized by food service personnel to feed personnel.

Other items of this nature were 3,000 gallons of bleach for water purification as well as 250 cases of toilet paper.

2. Equipment \$1,480

Dormitory equipment replacement of \$1,300. The items to be replaced will be under the modular room concept and consist of 867 equivalent rooms of furniture out of 1,360 rooms, each including the following items:

1 refrigerator
 12 x 12 carpet
 6 x 12 drapes
 2 straight chairs
 2 vertical storage units
 2 beds
 2 mattresses
 2 box springs

An additional \$180 thousand is required for other requirements including the following for other furnishings and equipment for dormitories and bachelor office quarters:

60 refrigerators
 144 dryers
 153 washing machines
 146 drapes
 Bedding to include mattresses, sheets,
 pillow cases, blankets, bedspreads

The \$180 thousand includes \$67,000 for replacement of calculators, typewriters, reproduction equipment, air conditioners, tools, radios, and special issue organizational equipment.

3. Contractual Repairs \$ 785

a. Civil Engineer Services: \$374 Thousand. Repair air conditioning, refrigeration systems and utility systems. Air conditioning includes data processing equipment building, living quarters, and offices. Refrigeration repairs in the commissary, mess halls, food areas. Electrical repairs to all areas, sanitary servicing of sewer lines, water lines, etc. In addition, repair of generators, compressors and transformers.

b. Facility Projects (in-house as well as contract): \$229 Thousand. These items are of an emergency nature to repair/replace security fencing, repair doors, windows, locks, roofs, etc. Also for repair of nose docks and sealing the radio station.

c. Contract maintenance: \$140 Thousand. This is to repair furniture that was damaged but not completely destroyed, i.e., backs of chairs missing, scratches or gouges in wood from flying debris, desks, chairs, etc. Also includes repair of vehicles beyond in-house capability, i.e., complete transmission over-hauling, axle works, replacing of windshield, windows, headlights and painting of vehicles.

d. Other equipment: \$42 Thousand. For contract maintenance of reproducing equipment, calculators, typewriters, and flight line equipment.

General Purpose Forces: \$ 54

Temporary duty travel costs for RED HORSE/PRIME BEEF personnel 110 maintenance personnel (primarily civil engineer types) deployed to Guam for 30-60 days to assist in maintenance/repair projects, construction of temporary facilities, and general clean-up of Andersen AB.

Intelligence and Communications: \$3,915

1. Damage to Satellite Tracking Station

Typhoon winds caused extensive damage to the satellite tracking station on Guam, including irreparable damage to the antenna feed of the 60 foot antenna system (the antenna was built by Radiation Corp. and is no longer a production or inventory item), severe damage to the radome which encircles the antenna system, and to peripheral antenna equipment. The 110 foot radome (which was stressed for 150 MPH winds) was blown from its pedestal, damaging the antenna and technical buildings - the antenna wave guide and multi-purpose feed were destroyed. Most of the antenna panels were loosened, punctured or blown away. Falling radome panels destroyed an air conditioning condenser unit. Water flooded the area under the false flooring in technical room causing corrosion to underfloor cables. The microwave

reflector and tower were blown down and the microwave transmitter severely damaged.

2. Repairs Required and Cost (\$3,915)

a. "Quick fix" repairs will temporarily \$ 500
replace the destroyed antenna feed for the 60 foot antenna system by transport from the CONUS (Kodiak, Alaska) and installation of an antenna feed from a 14 foot space ground link system (SGLS-14, on an interim basis) into the 60 foot antenna dish at Guam. Operational capability has been partially restored by this action, providing support to low altitude satellites.

b. Permanent restoration of technical equip- \$ 3,400
ment, including transportation from the CONUS and installation. Specific items involved:

	(Whole Dollars)
(1) Refurbishment, transporta-	\$1,320,000
tion and installation of the 14 foot SGLS antenna dish and support equipment (from Kodiak, Alaska to Guam via Palo Alto). This action will expand "quick fix" by providing a complete SGLS-14 system for limited interim operation of the Guam Satellite Tracking Station, until SGLS-60 can be repaired (12-18 months).	

(2) Transportation and installa-	\$ 880,000
tion of antenna feed for the SGLS-60.	

(3) Transportation and installa-	\$ 900,000
tion of radome for SGLS-60.	

(4) Repair of peripheral support	\$ 300,000
equipment for SGLS-60 (disassemble, rewire, reassemble).	

c. Temporary deployment of personnel to \$ 15
assist in clean-up and rehabilitation of Guam Satellite Tracking Station.

Central Supply and Maintenance \$1,098

1. 2,745,454 pounds of material were moved to Guam from 23 May to 29 June on 119 C-5/C-141 Missions.

2. Commodities airlifted on channel missions included generators, refrigeration units, chain link fencing, transformers, and large quantities of electrical wiring.

Training Medical. \$ 23

1. Repair of water damage \$ 22.2

\$21.1 for replacement of medical/dental supplies which were destroyed/contaminated; \$1.1 for janitorial/administrative supplies destroyed.

2. Repair of ambulances \$.5

For body work and painting of ambulances damaged by flying/falling debris.

3. Replacement of refrigerator motor \$.3

Replacement of motor for refrigerator used to store drugs - burned out by electrical failure.

Total \$13,290

AF PERSONNEL TEMPORARILY DEPLOYED TO ASSIST

Chairman McCLELLAN. How many Air Force personnel will be temporarily deployed to assist in recovery efforts? For what duration? How many are already there on TDY?

General BLANTON. Approximately 210 personnel with various special skills—primarily civil engineering personnel (carpenters, electricians, plumbers, and metal workers) plus security police and food service specialists—were temporarily deployed to Guam to assist in recovery operations. Almost all of these personnel have now returned to their home stations.

In addition, a team of 10 communications engineering specialists went to Guam to assess the damage to the Satellite Tracking Station, and to determine the specifications for the repair needed on the station (antenna, radome and peripheral equipment).

REPAIRS TO SATELLITE FACILITY

Chairman McCLELLAN. What specific repairs need to be done to the satellite telemetry, tracking and commanding facility?

General BLANTON. The Guam facility is one of the six worldwide satellite tracking stations of the Air Force Satellite Control Facility. Satellite programs of the highest national priority are included in the support requirements of the Guam facility. The station supports 12 to 15 percent of the total network loading. The station is comprised of five main subsystems. They include the telemetry subsystem, tracking and commanding subsystem, data subsystem, communications subsystem, and operations control subsystem. The major component of the tracking and commanding subsystem is the 60-foot antenna system. Because of its size and external exposure, the antenna was the system which sustained the major damage. The antenna was built by Radiation Corp. and is no longer in production. The typhoon did extensive damage to the antenna system and its associated peripheral equipment. The major components which must be repaired or replaced include the antenna feed and wave guide; panels in the reflector dish; radome; microwave reflector, tower, and transmitter; bore sight tower, corroded cabling and other peripheral equipment. Costs include necessary transportation, design, installation, and systems documentation. The \$3,250,000 required for the permanent repair can be obligated up until September 30, 1976 under an existing Aeronutronic-Ford contract which provides normal network support.

Chairman McCLELLAN. What is the present status of this facility?

General BLANTON. The initial phase of the restoration, based on the critical requirement for the tracking station, was to accomplish interim repairs and establish a limited operational capability at a cost of \$535,000. Because some critical antenna parts were unavailable and require long manufacturing lead-time, parts from surplus 14-foot antenna were used in the interim repair. Although these temporary repairs provide only low altitude satellite coverage, they have enabled the station to provide partial support; that is, the most critical high priority satellites. The station has been operational in its limited capability since the first of August.

Chairman McCLELLAN. Have any of the repairs already been accomplished?

General BLANTON. Yes. Station cleanup and some permanent restoration was made to the antenna reflector (replacement of missing panels), bore sight tower, and microwave system. Most of the repairs were of a temporary nature, however, and require more extensive permanent repair or replacement. Major items still to be repaired or replaced are the antenna feed, radome, cabling additional reflector panels, and other peripheral equipment.

PAYMENT FOR TRANSPORTATION OF CARGO ALREADY DELIVERED

Chairman McCLELLAN. Who paid the Military Airlift Command for delivery of 1373 short tons of supplies and equipment urgently needed?

General BLANTON. The Air Force Logistics Command is responsible for funding the cost of transportation of cargo on channel missions of the Airlift Service Industrial Fund, which is operated by MAC. In this case, Logistics Command paid for airlift of 1,373 short tons of supplies and equipment urgently needed for initial recovery efforts and replacement of lost or irreparably damaged items. Cargo included generators, refrigeration units, transformers, chain link fencing and electrical wiring.

O. & M. DEPOT MAINTENANCE PROGRAM

Chairman McCLELLAN. What is the total fiscal year 1976 and 197T O. & M. financed program of depot maintenance, split into its component parts (for example, aircraft, exchangeables, engines, etc.)? Through the end of August, how much had been obligated against the total program? Explain why (if) you intend to obligate the full amount appropriated and how this will be accomplished during the last month of the fiscal year.

General BLANTON. The total fiscal year 1976 and fiscal year 197T O. & M. financed depot maintenance program is \$1,433 million. Through August 31, 1976, \$1,415 million was obligated. The remainder of the fiscal year 1976/TQ funding, \$18 million, is required to meet force readiness requirements and will be obligated in September 1976.

The component parts of O. & M. financed depot maintenance program are as follows:

[Whole dollars]

	Fiscal year 1976	Fiscal year 197T
Aircraft maintenance.....	\$291,154	\$70,103
Missile maintenance.....	12,768	7,120
Engine maintenance.....	105,011	23,903
Other major end item maintenance.....	34,238	3,781
Exchangeable item maintenance.....	688,565	149,543
Area/base support.....	37,512	9,672
Total.....	1,169,248	264,122

FISCAL YEAR 1976/7T O. & M. APPROPRIATION/OBLIGATION

Chairman McCLELLAN. What is the total amount appropriated for Air Force O. & M. in fiscal year 1976 and 197T? How much had been obligated through June 1976, July 1976, August 1976, and September 1976? Do you expect to be able to obligate all of the appropriated funds by the end of September? If not, how much would be available to offset these supplemental requirements?

General BLANTON. The total operation and maintenance, Air Force appropriations for fiscal year 1976 and fiscal year 197T including supplementals are \$7,669.5 million and \$1,957.3 million, respectively, for a total of \$9,626.8 million. The total amounts obligated through June, July, and August 1976 are:

[In millions of dollars]

	Fiscal year—		Total
	1976	197T	
Available.....	\$7,669.5	\$1,957.3	\$9,626.8
Obligations through:			
June 30, 1976.....			7,553.2
July 31, 1976.....			8,531.7
Aug. 31, 1976 (actual).....			9,003.9
Sept. 30, 1976.....			9,626.8

With the merger of the fiscal year 1976 and fiscal year 197T appropriations, Air Force programs are being managed and executed on a 15-month fiscal year basis. Through August 1976, direct Air Force obligations average \$643 million per month. This rate will continue through September 1976 when the total \$9,626.8 million will be fully obligated.

FISCAL YEAR 1976/197T BUDGETED VERSUS ACTUAL MAN-YEARS

Chairman McCLELLAN. Compare the Air Force's budgeted fiscal year 1976 and 197T man-years (as approved by the Congress in the basic and supplemental appropriations act) with the actual man-years now estimated for fiscal year 1976 and 197T. Indicate the dollar value of the differences, if there are any. Why can't these funds be used to offset some of the supplemental requirements?

General BLANTON. The following is a comparison of currently estimated civilian man-years and costs with amounts approved in the fiscal year 1976/1977 appropriations, including pay raise supplementals:

	Fiscal year—		Total
	1976	1977	
Dollars (millions):			
Current estimate.....	\$2,324.8	\$579.4	\$2,904.2
Approved.....	2,305.4	579.4	2,884.8
Difference.....	+19.4	0	+19.4
Man years:			
Current estimate.....	169,436.0	40,500.0	209,936.0
Approved.....	168,094.0	40,500.0	208,594.0
Difference.....	+1,342.0	0	+1,342.0

Because actual fiscal year 1976 man-years exceeded the number funded by the O. & M. appropriation, civilian pay costs are greater dollars available for fiscal year 1976/1977.

AMOUNT OF REQUEST ALREADY SPENT

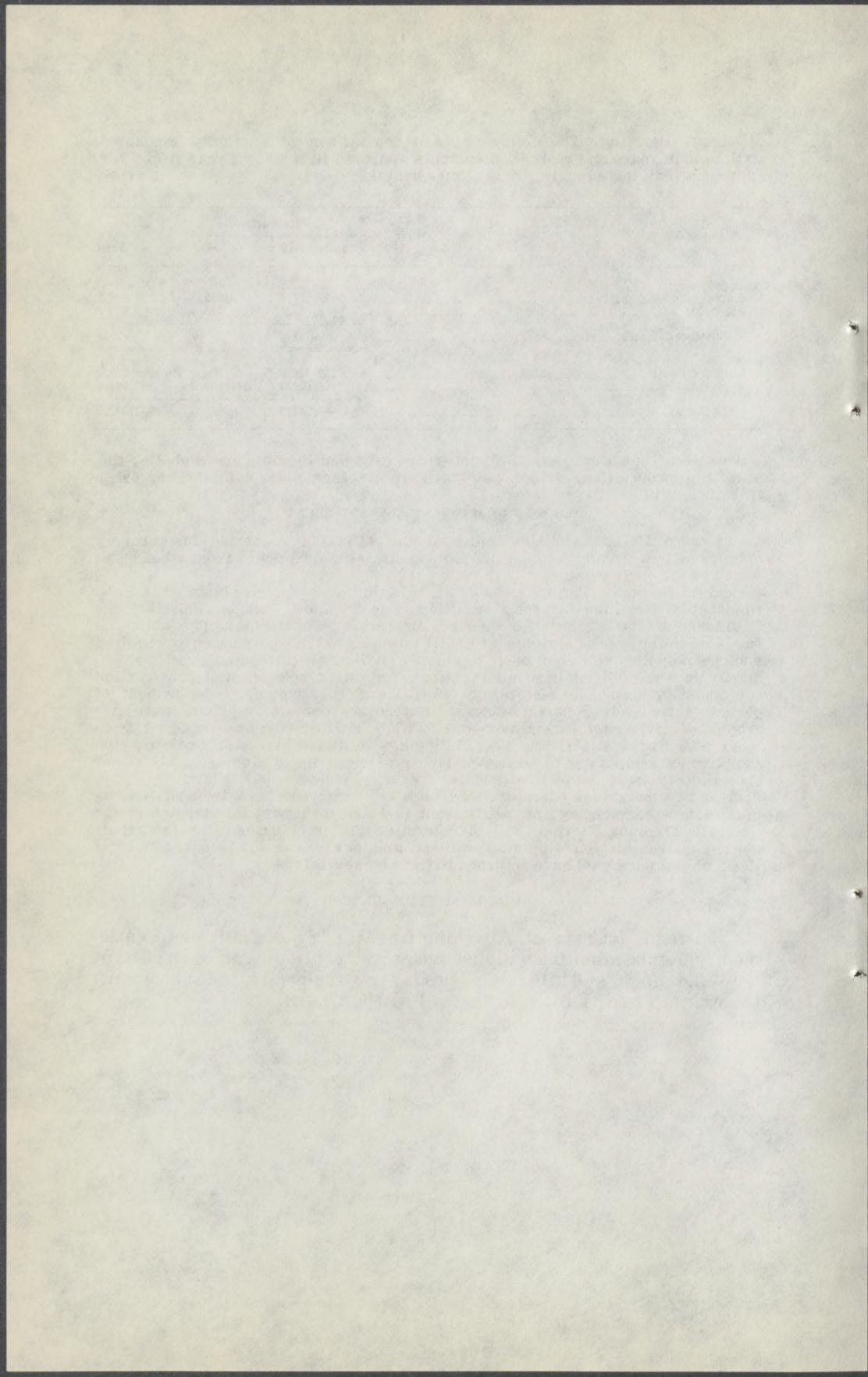
Chairman McCLELLAN. How much of the \$3,389,000 requested for recovery operations has already been spent? How many assistance teams from other bases were or are now in Guam?

General BLANTON. Through August 31, 1976 the Air Force has obligated O. & M. funds of \$7.7 million for costs resulting from Typhoon Pamela. This includes \$2,914,000 of the \$3,389,000 requested for recovery operations. The obligated funds were for special assignment airlift missions to transport urgently required vehicles, supplies and equipment to Guam; civilian overhires and overtime, primarily in the civil engineering functions; rental of vehicles and construction equipment to assist in restoration efforts; and the temporary deployment of personnel from other bases to assist in recovery operations. There were two groups of civil engineering personnel (RED HORSE teams) deployed from Osan AB, Korea and Clark AB, Philippines to assist in repair projects, construction of temporary facilities, and general clean up of Andersen AB. Other specialists in selected skills (such as security police, cooks, plumbers) were deployed from various bases to assist on a temporary basis. A team of 10 communications engineering specialists went to Guam to assess the damage to the Satellite Tracking Station, and to determine the specifications for the repair needed on the station (antenna, radome and peripheral equipment). Most of the deployed personnel have returned to their home stations.

SUBCOMMITTEE RECESS

Chairman McCLELLAN. Anything further? If not, thank you, gentlemen. The subcommittee will now recess, subject to the call of the Chair.

[Whereupon, at 11:46 a.m., Tuesday, September 14, the subcommittee was recessed, subject to the call of the Chair.]



SUPPLEMENTAL REQUESTS FOR TYPHOON DAMAGE ON GUAM AND FOR OTHER PURPOSES

FRIDAY, SEPTEMBER 17, 1976

U.S. SENATE,
SUBCOMMITTEE ON MILITARY CONSTRUCTION,
Washington, D.C.

The subcommittee met at 10 a.m. in room S-146, the Capitol, Hon. Mike Mansfield (chairman) presiding; present, Senators Mansfield, Inouye, Stevens and Bellmon.

PRESIDENTIAL REQUEST FOR SUPPLEMENTAL APPROPRIATIONS

OPENING REMARKS OF SENATOR MANSFIELD

Senator MANSFIELD. The subcommittee will come to order.

On May 21 of this year Typhoon Pamela struck the island of Guam. While this geographic area is subject to major storms with uncomfortable regularity, Pamela was uniquely destructive. Maximum winds exceeded 145 knots, with over 7 hours of sustained winds greater than 100 knots; almost 23 inches of rain fell. Needless to say, damage to military installations on the island was both heavy and extensive, with many facilities totally destroyed. As a result, the President has requested supplemental appropriations totaling \$189 million for the transition period ending September 30, 1976. I will insert applicable portions of the correspondence in the record at this point.

[The correspondence follows:]

THE WHITE HOUSE,
Washington, July 29, 1976.

The SPEAKER OF THE HOUSE OF REPRESENTATIVES.

SIR: I ask the Congress to consider proposed supplemental appropriations for the transition quarter in the amount of \$402,000,000 for the Department of Defense—Military.

The details of these proposals are set forth in the enclosed letter from the Director of the Office of Management and Budget. I concur in his comments and observations.

Respectfully,

GERALD R. FORD.

Enclosure.

[Estimate No. 106, 94th Cong., 2d sess.]

EXECUTIVE OFFICE OF THE PRESIDENT,
OFFICE OF MANAGEMENT AND BUDGET,
Washington, D.C., July 29, 1976.

The PRESIDENT,
The White House.

SIR: I have the honor to submit for your consideration proposed supplemental appropriations for the transition quarter in the amount of \$402,000,000 for the Department of Defense—Military. The details of these requests are contained in the enclosure to this letter.

I have carefully reviewed these budget requests and I am satisfied that they are necessary at this time. I recommend, therefore, that these proposals be transmitted to the Congress.

Respectfully,

JAMES T. LYNN, *Director.*

Enclosure.

PROPOSED TRANSITION QUARTER SUPPLEMENTALS

DEPARTMENT OF DEFENSE—MILITARY

OPERATION AND MAINTENANCE

OPERATION AND MAINTENANCE, NAVY

For an additional amount for "Operation and maintenance, Navy" for the period July 1, 1976, through September 30, 1976; \$30,846,000.

OPERATION AND MAINTENANCE, AIR FORCE

For an additional amount for "Operation and maintenance, Air Force" for the period July 1, 1976, through September 30, 1976; \$13,290,000.

MILITARY CONSTRUCTION

MILITARY CONSTRUCTION, NAVY

For an additional amount for "Military construction, Navy" for the period July 1, 1976, through September 30, 1976, \$77,869,000, to remain available until expended.

MILITARY CONSTRUCTION, AIR FORCE

For an additional amount for "Military construction, Air Force" for the period July 1, 1976, through September 30, 1976, \$26,622,000, to remain available until expended.

FAMILY HOUSING

FAMILY HOUSING, DEFENSE

For an additional amount for "Family housing, Defense" for the period July 1, 1976, through September 30, 1976, \$40,373,000, to be obligated and expended in the Family Housing Management Account established pursuant to section 501(a) of Public Law 87-554, in not to exceed the following amounts:

For the Navy and Marine Corps; Construction, \$12,250,000;

For the Air Force: Construction, \$20,121,000;

For Department of Defense: Operation, maintenance, \$8,002,000;

Provided, That the amounts provided under this head for construction shall remain available until expended.

These requests will finance replacement, repair, and restoration of facilities, equipment, and supplies that were destroyed or damaged by Typhoon Pamela, which struck Guam on May 21, 1976.

DEPARTMENT OF DEFENSE

DEPUTY ASSISTANT SECRETARY OF DEFENSE (INSTALLATIONS AND HOUSING)

STATEMENT OF HON. PERRY J. FLIAKAS, DEPUTY ASSISTANT SECRETARY OF DEFENSE (INSTALLATIONS AND HOUSING)

CONSTRUCTION AND MILITARY FAMILY HOUSING

Senator MANSFIELD. Today the subcommittee will hear testimony in support of that portion of the supplemental request dealing with construction and military family housing. The request in these areas totals \$144,864,000 of which approximately \$104.5 million relates to various Navy and Air Force construction projects and \$40.4 million to family housing. Witnesses appearing today are Mr. Perry J. Fliakas, Deputy Assistant Secretary of Defense (Installations and Housing); R. Adm. A. R. Marschall, Commander of the Naval Facilities Engineering Command; and Brig. Gen. William D. Gilbert, Deputy Director of Engineering and Services for the Air Force.

Gentlemen, we welcome you. Given the relatively limited amount of time we have to devote to this important matter, I would ask that you submit your prepared statements for the record, where they will be printed in full, and proceed with a summarization in your own words. The first witness will be Mr. Fliakas. Mr. Secretary, if you have a prepared statement, it will be placed in the record at the conclusion of your remarks.

Mr. FLIAKAS. Thank you, Mr. Chairman.

I am pleased to be here today in support of the President's request for the supplemental construction appropriation for the fiscal year 1976 transition quarter to permit the restoration and reconstruction of facilities on Guam which were destroyed or extensively damaged by Typhoon Pamela May 21, 1976.

EFFECTS OF TYPHOON PAMELA

This storm, as you know, Mr. Chairman, was one of the most destructive in the history of Guam. It cut a wide swath through the island and during the periods of its greatest wind velocity, estimated at 170 miles per hour, inflicted severe damage to Navy and Air Force installations and facilities in its path. One of the characteristics of this storm which marked it as unique from others and which accounted for its much greater damaging effects aside from the extremely high velocity of its winds, was its very slow passage over the island. Most typhoons in the past have traversed the island in a matter of a few hours, and their resulting damage though severe was limited by their relatively short period of activity.

In the case of Pamela the effects of her passage were felt over a 30-hour period and the resultant high wind damage was severely compounded by amounts of rain exceeding 30 inches which was three times that of Typhoon Karen which swept the island in 1962.

POST-TYPHOON ACTION

Immediately following the cessation of the major force winds, the military commands activated initial damage assessment teams to inspect the gravity and extent of the damages in order to provide preliminary reports to Washington and to direct such local salvage or restoration actions as were locally practicable. Subsequently, both Navy and Air Force dispatched special teams of facility experts to the island to perform more detailed reviews of the damage and to prepare cost estimates for repair and replacement of the facilities damaged or destroyed. The findings and conclusions of those teams formed the basis for the appropriation request before your committee today.

On page 3 of my statement is a summary of the distribution of the requested appropriation between the Navy and the Air Force both for military construction and family housing. Because of the extensive nature and gravity of the storm damage and the urgency associated with restoring both the military operational capabilities and the living facilities of the military forces manning this strategically essential base, we solicit both your support and early action on this request.

PREPARED STATEMENT

Senator MANSFIELD. Thank you, Mr. Fliakas. We will insert your prepared statement in the record at this point after which you may introduce those accompanying you here today.

[The statement follows:]

Mr. Chairman, members of the committee; we are here today in support of the President's request for supplemental military construction appropriations for the fiscal year 1976 transition quarter to permit restoration and reconstruction of facilities on Guam which were destroyed or extensively damaged by Typhoon Pamela on May 21, 1976.

This storm, which was one of the most destructive in the history of Guam, cut a wide swath through the island and during the periods of its greatest wind velocity, estimated at 170 miles per hour, inflicted severe damage to Navy and Air Force installations and facilities in its path. One of the characteristics of this storm which marked it as unique from others and which accounted for its much greater damaging effects aside from the extremely high velocity of its winds, was its very slow passage over the island. Most typhoons in the past have traversed the island in a matter of a few hours, and their resulting damage though severe, was limited by their relatively short period of activity. In the case of Pamela, the effects of her passage were felt over a 30-hour period, and the resultant high wind damage was severely compounded by amounts of rain exceeding 30 inches which was three times that of Typhoon Karen which swept the island in 1962.

Immediately following the cessation of the major force winds, the military commands activated initial damage assessment teams to inspect the gravity and extent of the damages in order to provide preliminary reports to Washington, and to direct such local salvage or restoration actions as were locally practicable. Subsequently, both Navy and Air Force dispatched special teams of facility experts to the island to perform more detailed reviews of the damage, and to prepare cost estimates for repair and replacement of the facilities damaged or

destroyed. The findings and conclusions of those teams formed the basis for the appropriation request before your committee today.

The appropriations for military construction, and for family housing construction, and operations and maintenance totals \$144,864,000, of which \$40,373,000 is associated with family housing and the remainder, \$104,491,000, is for construction of various other military facilities.

Within the total appropriations requested, \$104,491,000 is required for design and construction of the military construction projects to be undertaken, and an additional \$40,373,000 is needed to restore or repair the family housing damaged by the storm.

The following tabular summary reflects the distribution of the requested appropriations between the Navy and Air Force, both for military construction and family housing:

<i>Military construction</i>		<i>Appropriation request</i>
<i>Service</i>		
Navy -----		\$77, 869, 000
Air Force-----		26, 622, 000
	Total -----	<u>104, 491, 000</u>
<i>Family housing, defense</i>		
Navy and Marine Corps-----		12, 250, 000
Air Force-----		20, 121, 000
Department of Defense, operation and maintenance-----		8, 002, 000
	Total -----	<u>40, 373, 000</u>
	Grand total-----	<u>144, 864, 000</u>

Because of the extensive nature and gravity of the storm damage and the urgency associated with restoring both the military operational capabilities and the living facilities of the military forces manning this strategically essential base, we solicit both your support and early action on this request.

I have with me, today, Admiral Marschall of the Department of the Navy and General Gilbert from the Department of the Air Force. Both of these gentlemen have prepared statements which they would like to present at this time and these statements delineate the character and scope of the work to be undertaken in their respective requests. Accordingly, Mr. Chairman, with your permission I would like to introduce Admiral Marschall for the purpose of delivering his statement and he will then be followed by General Gilbert. Thank you.

INTRODUCTION OF ASSOCIATES

Mr. FLIAKAS. I have with me today Admiral Marschall of the Department of the Navy and General Gilbert from the Department of the Air Force. These gentlemen have prepared statements which include a presentation which I think would be informative to the committee which delineate the character and the scope of the work to be undertaken in their respective requests. Accordingly, Mr. Chairman, I would like to introduce Admiral Marschall first for his presentation.

Senator MANSFIELD. Thank you, Mr. Secretary.

I think I will turn the meeting over to Senator Inouye. I have to leave very shortly so will you conduct it from now on?

Senator INOUE [presiding]. Thank you very much, Mr. Chairman.

DEPARTMENT OF THE NAVY

NAVAL FACILITIES ENGINEERING COMMAND

STATEMENT OF REAR ADM. A. R. MARSCHALL, CEC, USN, COMMANDER, NAVAL FACILITIES ENGINEERING COMMAND

RESTORATION OF NAVAL FACILITIES ON GUAM

Senator INOUE. Admiral Marschall.

Admiral MARSCHALL. Mr. Chairman, the Navy requests \$96 million. Of this amount, \$18 million is for family housing, with construction accounting for \$12 million, and operation and maintenance \$6 million. Included within the \$78 million for facilities restoration is \$6 million for planning and design.

AFFIRMATION OF REQUIREMENT

The base complex on Guam is needed in its present size and configuration to support the Pacific Fleet in the Western Pacific area. The potential for adjustments to base loading and missions was reviewed during the formulation of the restoration project. The base realignment study announced by the Navy on March 17, 1976, included a statement that the Navy Ship Repair Facility was being studied for possible reduction to caretaker status. Whether the ship repair facility continues in operation at current level or is reduced to caretaker status, its restoration is required for readiness in Western Pacific contingencies.

PROJECT HIGHLIGHTS

The major part of the project will restore facilities at five installations of the Commander in Chief Pacific Fleet in the amount of \$53 million or 73 percent of the \$72 million for restoration of regular military facilities. Other major commands with regular military facilities construction are the Chief of Naval Material, Naval Telecommunications Command, and the Bureau of Medicine and Surgery with \$13 million, \$6 million, and \$1 million, respectively.

At this point, Mr. Chairman, I would like to have Mr. Taylor show you some representative photographs of the damage which occurred.

Mr. TAYLOR. Mr. Chairman, this was the gymnasium at the Naval Air Station at Agana. It was two quonset huts constructed during World War II. They were severely damaged, and we have had to demolish them for the sake of health and safety.

Senator INOUE. Can I ask, what will you replace that with, another quonset hut?

Admiral MARSCHALL. No, sir, a permanent structure.

Mr. TAYLOR. This was the material handling equipment repair shop of the naval supply depot. It was severely damaged and we have de-

stroyed it. This function will be combined with our public works center and a much smaller facility will be constructed to replace it.

This, sir, was the disposal warehouse of the Defense Supply Agency. The extent of the damage is apparent from the photograph. The facility had to be demolished.

Admiral MARSCHALL. As I discuss the restoration program, Mr. Taylor will point out the location of the activity on the map.

COMMANDER IN CHIEF, PACIFIC FLEET, AGANA AIR STATION

At the Agana Air Station, \$8 million is requested to restore personnel support facilities, with the major items as follows: the restoration of bachelor enlisted quarters for 295 men, an alcoholic treatment facility; a Navy exchange cafeteria and library, and the replacement of a Navy exchange and gymnasium, which you have just seen.

NAVAL STATION

For the naval station, \$32 million is requested for construction in the operational, maintenance, supply, administrative, and personnel support categories. In the operational category, the construction proposed will restore inner and outer portions of a breakwater that extends across Apra Harbor, reconstruct a berthing wharf, and restore and stabilize the shoreline at Alpha Wharf. In the maintenance category, a replacement vehicle maintenance facility is required to support the Naval Construction Forces Pacific Fleet Alert Battalion and its 400 pieces of construction, tactical, and automotive equipment.

For the supply category, two warehouses will be constructed to replace temporary buildings that were utilized for supporting operating forces and Naval Construction Forces.

In the administrative category, eight former barracks buildings used for administrative spaces will be improved to reduce the likelihood of future typhoon damage and an operations building will be constructed for Naval Construction Forces. In the personnel support category, the facilities proposed for restoration or replacement include a 169-man bachelor enlisted quarters, confinement facility, chapel, hobby shop, Navy Exchange warehouse, child care center/kindergarten, and a marina building.

SHIP REPAIR FACILITY

The request for the ship repair facility is \$4 million for restoration of a repair wharf in the operational category and the replacement of a foundry, service group building, and ship repair storage facility in the maintenance category.

SUPPLY DEPOT

For the supply depot, \$7 million is requested. In the operational category, \$5 million is requested to restore a supply wharf that provides 2,400 feet of cargo loading and unloading berthing space and a transit shed to place undercover incoming cargo. In the supply category, a replacement facility is requested for a disposal ware-

house—a photo which you saw—that is needed to prevent deterioration and depreciation of the value of surplus materials.

MAGAZINE

The request of \$1 million is to replace a petty officers' club for the magazine, which is in a remote area of Guam.

NAVAL MATERIAL COMMAND

Turning to the Naval Material Command, the request is \$13 million for two installations.

DISTRICT PUBLICATIONS AND PRINTING OFFICE

For the district publications and printing office, the request is \$1 million to replace the two structures that were utilized for a print shop and the storage of papers and forms.

PUBLIC WORKS CENTER

The request for the public works center is \$12 million for restoration of facilities in the operational, maintenance, and utilities categories. In the operational category, the request will harden the telephone system by placing it underground. In the maintenance category, a replacement material handling equipment shop for the maintenance of 285 Navy and 80 Air Force forklift trucks and tow tractors—a photo of which you saw—and a building for public works shops storage are requested.

The electric power distribution system will be restored and improved on the primary side by replacing wood poles with concrete poles and on the secondary side by installing additional guying on the wood poles. Also in the utilities category is a request to replace a salt water pump station used to meet flushing requirements of ships berthed along five repair wharves.

NAVAL TELECOMMUNICATIONS COMMAND

For the Naval Telecommunications Command, \$6 million is requested for one installation, the Naval Communications Area Master Station, Western Pacific. The facilities requested will, in the operational category, restore and reconfigure the Barrigada transmitter site and in the personnel support category replace a hobby shop and youth center.

BUREAU OF MEDICINE AND SURGERY

The request for the Bureau of Medicine and Surgery is \$1 million to restore an enlisted men's club and to provide a typhoon-resistant generator building for uninterrupted power supply to the medical center in an emergency.

FAMILY HOUSING

The total request for the restoration of family housing and related facilities is \$18 million. This amount is for three separate projects.

The majority of the funds, \$12 million, is required for replacement of window and door frames blown away during the typhoon. Another \$250,000 is requested for replacement of a community center which was completely destroyed. The third project is for basic operational and maintenance repair work required to bring the family housing areas back to livable standards.

SUMMARY

In summary, the facilities requested under the restoration project are validated requirements of the Navy and are needed to enable the commands and activities on Guam to carry out effectively their missions. The personnel support facilities are needed to maintain morale of personnel serving in remote areas which is essential for effective performance. We seek your support for this restoration and will be pleased to answer any questions the committee may have.

PREPARED STATEMENT

Senator INOUE. Thank you, very much, Admiral. Your prepared statement will be placed in the record at this point.
[The statement follows:]

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE:

I AM REAR ADMIRAL A. R. MARSCHALL, COMMANDER OF THE NAVAL FACILITIES ENGINEERING COMMAND. I APPEAR BEFORE YOU TODAY TO REVIEW THE NAVY'S PROJECT FOR RESTORATION OF FACILITIES ON GUAM DAMAGED BY TYPHOON PAMELA ON MAY 21, 1976.

NAVY REQUEST

THE REQUEST IS \$96 MILLION DOLLARS. OF THIS AMOUNT, \$18 MILLION DOLLARS IS FOR FAMILY HOUSING, WITH CONSTRUCTION ACCOUNTING FOR \$12 MILLION AND OPERATION AND MAINTENANCE \$6 MILLION. INCLUDED WITHIN THE \$78 MILLION FOR FACILITIES RESTORATION IS \$6 MILLION FOR PLANNING AND DESIGN.

AFFIRMATION OF REQUIREMENT

THE BASE COMPLEX ON GUAM IS NEEDED IN ITS PRESENT SIZE AND CONFIGURATION TO SUPPORT THE PACIFIC FLEET IN THE WESTERN PACIFIC AREA. THE POTENTIAL FOR ADJUSTMENTS TO BASE LOADING AND MISSIONS WAS REVIEWED DURING THE FORMULATION OF THE RESTORATION PROJECT. THE BASE REALIGNMENT STUDY ANNOUNCED BY THE NAVY ON MARCH 17, 1976 INCLUDED A STATEMENT THAT THE NAVY SHIP REPAIR FACILITY WAS BEING STUDIED FOR POSSIBLE REDUCTION TO CARETAKER STATUS. WHETHER THE SHIP REPAIR FACILITY CONTINUES IN OPERATION AT CURRENT LEVEL, OR IS REDUCED TO CARETAKER STATUS, ITS RESTORATION IS REQUIRED FOR READINESS IN WESTERN PACIFIC CONTINGENCIES. APPROXIMATELY \$4 MILLION IS REQUESTED FOR THE RESTORATION OF SHIP REPAIR FACILITIES.

PROGRAM GUIDANCE

IN DEVELOPING THIS PROJECT THE GUIDANCE FOLLOWED WAS THAT:

(1) ONLY FACILITIES SUPPORTED AND VALIDATED BY THE NAVY SHORE FACILITIES PLANNING SYSTEM WOULD BE INCLUDED, (2) FACILITIES WOULD BE SCOPED TO SATISFY A VALIDATED REQUIREMENT. IN MOST CASES, THE SCOPE OF RESTORED FACILITIES WILL BE EQUAL TO OR LESS THAN THE FACILITIES DAMAGED OR DESTROYED IN THE STORM.

PROJECT HIGHLIGHTS

THE MAJOR PORTION OF THE RESTORATION WILL OCCUR IN OPERATIONAL, MAINTENANCE AND PERSONNEL SUPPORT FACILITIES. THE PERSONNEL SUPPORT

FACILITIES ARE OF CRITICAL IMPORTANCE TO ALL NAVY MISSIONS ON GUAM CONSIDERING ITS ISOLATION, LIMITED PUBLIC TRANSPORTATION AND LIMITED COMMUNITY SUPPORT. THE RESTORATION FROM TYPHOON KAREN IN 1962 WAS PRIMARILY FOR OPERATIONAL FACILITIES. LIMITED DAMAGE OCCURRED FROM PAMELA TO FACILITIES BUILT TO TYPHOON-RESISTANT CRITERIA FOLLOWING TYPHOON KAREN.

MAJOR COMMANDS

THE MAJOR PART OF THE PROJECT WILL RESTORE FACILITIES AT 5 INSTALLATIONS OF THE COMMANDER IN CHIEF PACIFIC FLEET IN THE AMOUNT OF \$53 MILLION OR 73 PERCENT OF THE \$72 MILLION FOR RESTORATION OF REGULAR MILITARY FACILITIES. OTHER MAJOR COMMANDS WITH REGULAR MILITARY FACILITIES CONSTRUCTION ARE THE CHIEF OF NAVAL MATERIAL, NAVAL TELECOMMUNICATIONS COMMAND, AND THE BUREAU OF MEDICINE AND SURGERY WITH \$13 MILLION, \$6 MILLION AND \$1 MILLION, RESPECTIVELY.

COMMANDER IN CHIEF PACIFIC FLEET

AGANA AIR STATION

AT THE AGANA AIR STATION, \$8 MILLION IS REQUESTED TO RESTORE PERSONNEL SUPPORT FACILITIES WITH THE MAJOR ITEMS THE RESTORATION OF BACHELOR ENLISTED QUARTERS FOR 295 MEN, AN ALCOHOLIC TREATMENT FACILITY, NAVY EXCHANGE CAFETERIA AND LIBRARY, AND REPLACEMENT OF A NAVY EXCHANGE AND GYMNASIUM.

NAVAL STATION

FOR THE NAVAL STATION, \$32 MILLION IS REQUESTED FOR CONSTRUCTION IN THE OPERATIONAL, MAINTENANCE, SUPPLY, ADMINISTRATIVE, AND PERSONNEL SUPPORT CATEGORIES. IN THE OPERATIONAL CATEGORY, THE CONSTRUCTION PROPOSED WILL RESTORE INNER AND OUTER PORTIONS OF A BREAK-WATER THAT EXTENDS ACROSS APRA HARBOR, RECONSTRUCT A BERTHING WHARF AND RESTORE AND STABILIZE THE SHORELINE AT ALPHA WHARF. IN THE MAINTENANCE CATEGORY, A REPLACEMENT VEHICLE MAINTENANCE FACILITY IS REQUIRED TO SUPPORT THE NAVAL CONSTRUCTION FORCES PACIFIC FLEET ALERT BATTALION AND ITS 400 PIECES OF CONSTRUCTION, TACTICAL AND AUTOMOTIVE EQUIPMENT.

FOR THE SUPPLY CATEGORY, TWO WAREHOUSES WILL BE CONSTRUCTED TO REPLACE TEMPORARY BUILDINGS THAT WERE UTILIZED FOR SUPPORTING OPERATING FORCES AND NAVAL CONSTRUCTION FORCES. IN THE ADMINISTRATIVE CATEGORY, 8 FORMER BARRACKS BUILDINGS USED FOR ADMINISTRATIVE SPACES WILL BE IMPROVED TO REDUCE THE LIKELIHOOD OF FUTURE TYPHOON DAMAGE, AND AN OPERATIONS BUILDING WILL BE CONSTRUCTED FOR NAVAL CONSTRUCTION FORCES. IN THE PERSONNEL SUPPORT CATEGORY, THE FACILITIES PROPOSED FOR RESTORATION OR REPLACEMENT INCLUDE A 169-MAN BACHELOR ENLISTED QUARTERS, CONFINEMENT FACILITY, CHAPEL, HOBBY SHOP, NAVY EXCHANGE WAREHOUSE, CHILD CARE CENTER/KINDERGARTEN, AND A MARINA BUILDING.

SHIP REPAIR FACILITY

THE REQUEST FOR THE SHIP REPAIR FACILITY IS \$4 MILLION FOR THE RESTORATION OF A REPAIR WHARF IN THE OPERATIONAL CATEGORY, AND THE REPLACEMENT OF A FOUNDRY, SERVICE GROUP BUILDING, AND SHIP REPAIR STORAGE FACILITY IN THE MAINTENANCE CATEGORY.

SUPPLY DEPOT

FOR THE SUPPLY DEPOT, \$7 MILLION IS REQUESTED. IN THE OPERATIONAL CATEGORY, \$5 MILLION IS REQUESTED TO RESTORE A SUPPLY WHARF THAT PROVIDES 2,400 FEET OF CARGO LOADING AND UNLOADING BERTHING SPACE, AND A TRANSIT SHED TO PLACE UNDERCOVER INCOMING CARGO. IN THE SUPPLY CATEGORY, A REPLACEMENT FACILITY IS REQUESTED FOR A DISPOSAL WAREHOUSE THAT IS NEEDED TO PREVENT DETERIORATION AND DEPRECIATION OF THE VALUE OF SURPLUS MATERIALS.

MAGAZINE

THE REQUEST IS \$1 MILLION TO REPLACE A PETTY OFFICERS' CLUB FOR THE MAGAZINE, WHICH IS IN A REMOTE AREA OF GUAM.

NAVAL MATERIAL COMMAND

TURNING TO THE NAVAL MATERIAL COMMAND, THE REQUEST IS \$13 MILLION FOR TWO INSTALLATIONS.

DISTRICT PUBLICATIONS AND PRINTING OFFICE

FOR THE DISTRICT PUBLICATIONS AND PRINTING OFFICE, THE REQUEST IS \$1 MILLION TO REPLACE THE TWO STRUCTURES THAT WERE UTILIZED FOR A PRINT SHOP AND THE STORAGE OF PAPERS AND FORMS.

PUBLIC WORKS CENTER

THE REQUEST FOR THE PUBLIC WORKS CENTER IS \$12 MILLION FOR RESTORATION OF FACILITIES IN THE OPERATIONAL, MAINTENANCE, AND UTILITIES CATEGORIES. IN THE OPERATIONAL CATEGORY, THE REQUEST WILL HARDEN THE TELEPHONE SYSTEM BY PLACING IT UNDERGROUND. IN THE MAINTENANCE CATEGORY, A REPLACEMENT MATERIAL HANDLING EQUIPMENT SHOP FOR THE MAINTENANCE OF 285 NAVY AND 80 AIR FORCE FORKLIFT TRUCKS AND TOW TRACTORS, AND A BUILDING FOR PUBLIC WORKS SHOPS STORAGE ARE REQUESTED.

THE ELECTRIC POWER DISTRIBUTION SYSTEM WILL BE RESTORED AND IMPROVED ON THE PRIMARY SIDE BY REPLACING WOOD POLES WITH CONCRETE POLES AND ON THE SECONDARY SIDE BY INSTALLING ADDITIONAL GUYING ON THE WOOD POLES. ALSO IN THE UTILITIES CATEGORY IS A REQUEST TO REPLACE A SALTWATER PUMP STATION USED TO MEET FLUSHING REQUIREMENTS OF SHIPS BERTHED ALONG 5 REPAIR WHARVES.

NAVAL TELECOMMUNICATIONS COMMAND

COMMUNICATIONS AREA MASTER STATION, WESTERN PACIFIC

FOR THE NAVAL TELECOMMUNICATIONS COMMAND, \$6 MILLION IS REQUESTED FOR ONE INSTALLATION, THE NAVAL COMMUNICATIONS AREA MASTER STATION, WESTERN PACIFIC. THE FACILITIES REQUESTED WILL, IN THE OPERATIONAL CATEGORY, RESTORE AND RECONFIGURE THE BARRIGADA TRANSMITTER SITE, AND IN THE PERSONNEL SUPPORT CATEGORY, REPLACE A HOBBY SHOP AND YOUTH CENTER.

BUREAU OF MEDICINE AND SURGERY

NAVAL REGIONAL MEDICAL CENTER

THE REQUEST FOR THE BUREAU OF MEDICINE AND SURGERY IS \$1 MILLION TO RESTORE AN ENLISTED MENS' CLUB AND TO PROVIDE A TYPHOON RESISTANT GENERATOR BUILDING FOR UNINTERRUPTED POWER SUPPLY TO THE MEDICAL CENTER IN AN EMERGENCY.

FAMILY HOUSING

THE TOTAL REQUEST FOR THE RESTORATION OF FAMILY HOUSING AND RELATED FACILITIES IS \$18 MILLION. THIS AMOUNT IS FOR THREE SEPARATE PROJECTS.

THE MAJORITY OF THE FUNDS, \$12 MILLION, IS REQUIRED FOR REPLACEMENT OF WINDOW AND DOOR FRAMES BLOWN AWAY DURING THE TYPHOON. ANOTHER \$250 THOUSAND IS REQUESTED FOR REPLACEMENT OF A COMMUNITY CENTER WHICH WAS COMPLETELY DESTROYED. THIS CENTER WILL PROVIDE MUCH NEEDED RECREATIONAL AND MEETING FACILITIES TO FAMILIES LIVING AT THIS REMOTE AREA. THE THIRD PROJECT IS FOR BASIC OPERATIONAL AND MAINTENANCE REPAIR WORK REQUIRED TO BRING THE FAMILY HOUSING AREAS BACK TO LIVABLE STANDARDS. INCLUDED IN THIS WORK IS JANITORIAL CLEAN-UP OF THE DWELLING UNIT, THE REMOVAL OF DEBRIS, INCLUDING FALLEN TREES, RESTORATION OF UTILITIES SERVICES AND REPAIRS TO ROADS AND OTHER GROUNDS IN THE FAMILY HOUSING AREAS.

SUMMARY

THE FACILITIES REQUESTED UNDER THE RESTORATION PROJECT ARE VALIDATED REQUIREMENTS OF THE NAVY AND ARE NEEDED TO ENABLE THE COMMANDS AND ACTIVITIES ON GUAM TO CARRY OUT EFFECTIVELY THEIR MISSIONS. THE PERSONNEL SUPPORT FACILITIES ARE NEEDED TO MAINTAIN MORALE OF PERSONNEL SERVING IN REMOTE AREAS, WHICH IS ESSENTIAL FOR EFFECTIVE PERFORMANCE. WE SEEK YOUR SUPPORT FOR THIS RESTORATION AND WILL BE PLEASED TO ANSWER ANY QUESTIONS THE COMMITTEE MAY HAVE.

Albert Rhoades Marschall was born in New Orleans, Louisiana, on May 5, 1921, son of Albert L. and Halcyon (Rhoades) Marschall. He attended Tulane University in New Orleans from 1937 until 1940 and in 1941 entered the U. S. Naval Academy, Annapolis, Maryland, on appointment from his native state. Graduated with distinction in the Class of 1945 on June 7, 1944 (accelerated course due to World War II), he was commissioned Ensign and subsequently advanced in rank to that of Rear Admiral, to date from July 1, 1970. He was transferred from the Line of the Navy to the Civil Engineer Corps in 1948. His selection for the rank of Rear Admiral was approved by the President on June 16, 1969.

Following graduation from the Naval Academy in 1944, he joined the USS ROSS (DD 563) and while on board that destroyer participated in the invasion of Leyte and the occupation of Japan. In June 1946 he reported to the pre-commissioning detail of the USS FORREST ROYAL (DD 872), and remained on board that ship after commissioning until July 1946. He next had post graduate instruction at the Rensselaer Polytechnic Institute, Troy, New York, from which he received the degrees of Bachelor of Civil Engineering and Master of Civil Engineering. He served as Assistant Public Works Officer and Public Works Officer at the Bureau of Yards and Docks Supply Depot, Davisville, Rhode Island, from September 1948 to September 1950, after which he attended the Junior Course at the Amphibious Warfare School, Marine Corps Schools, Quantico, Virginia.

In January 1951 he joined Amphibious Construction Battalion TWO and in April 1953 reported as Assistant Civil Engineer Corps Detailer in the Bureau of Naval Personnel, Navy Department, Washington, D. C. From September 1955 to July 1957 he had duty in connection with construction and real estate at the U. S. Naval Academy, then was assigned to the District Public Works Office, Twelfth Naval District, headquartered in San Francisco, California, where he remained until July 1960.

Completing instruction at the Armed Forces Staff College, Norfolk, Virginia, in January 1961, he returned to the Bureau of Naval Personnel to serve as Civil Engineer Corps Detailer. Transferred in July 1962 to the Bureau of Yards and Docks, Navy Department, he served as Director of Weapons and other Support Divisions until July 1964, when he became Public Works Officer at the Naval Academy. In September 1966 he assumed command of the 30th Naval Construction Regiment and from June 1967 had additional duty as Commander THIRD Naval Construction Brigade.

He reported in October 1967 as Commanding Officer of the Southeast Division, Naval Facilities Engineering Command and District Civil Engineer on the Staff of the Commandant of the Sixth Naval District, with headquarters in Charleston, South Carolina.

On March 2, 1970 he became Deputy Commander of the Pacific Division, Naval Facilities Engineering Command, Southeast Asia, with headquarters in Saigon, Republic of Vietnam, with additional duty as Officer in Charge of Construction, Naval Facilities Engineering Command Contracts, Republic of Vietnam and Commander THIRD Naval Construction Brigade.

In May 1971, he reported as Director of the Shore Installation Division, Office of the Chief of Naval Operations, Navy Department and served in this capacity until June 1972. He subsequently was detached for duty as Vice Commander, Naval Facilities Engineering Command and Deputy Chief of Civil Engineers, Navy Department, assuming these duties on 29 September 1972. He became Commander, Naval Facilities Engineering Command and Chief of Civil Engineers of the Navy on 11 May 1973.

Rear Admiral Marschall's personal decorations include the Distinguished Service Medal; Legion of Merit with Combat Distinguishing Device; Meritorious Service Medal; Combat Action Ribbon; Order of Military Merit, Chung Mu (Korea); and the National Order (Vietnam). He is also entitled to wear the Navy Unit Commendation Ribbon with bronze star; Meritorious Unit Citation with bronze star; American Defense Service Medal; American Campaign Medal; Asiatic-Pacific Campaign Medal; World War II Victory Medal; Navy Occupation Service Medal, with Asia Clasp; National Defense Service Medal with bronze star; the Vietnam Service Medal; the Philippine Liberation Service Ribbon with two stars; Philippine Presidential Unit Citation Badge; the Republic of Vietnam Campaign Medal and the Republic of Vietnam Armed Forces Meritorious Unit Citation (Gallantry Cross). In 1967 he received the George Goethals Medal from the Society of American Military Engineers.

His official home address is 2848 State Street, New Orleans, Louisiana. He is married to the former Marie Gamard of New Orleans, and they have five children, Thomas Rhoades Marschall, David Gamard Marschall, Mrs. Laurel Patterson, Pamela Joan Marschall, and Albert Louis Marschall II.

Rear Admiral Marschall is a member of Tau Beta Pi, the National Society of Professional Engineers, and the American Society of Civil Engineers. He is currently a Director-at-Large of the American Public Works Association and was National President of the Society of American Military Engineers. He is a registered Professional Engineer and Land Surveyor in Louisiana.

DEPARTMENT OF THE AIR FORCE

ENGINEERING AND SERVICES

STATEMENT OF BRIG. GEN. WILLIAM D. GILBERT, DEPUTY DIRECTOR OF ENGINEERING AND SERVICES FOR THE AIR FORCE

CONSTRUCTION PROGRAM FOR TYPHOON DAMAGES

Senator INOUE. May we hear from General Gilbert.

General GILBERT. Yes, sir.

Mr. Chairman, it is a pleasure to appear before you to present the Air Force construction program for restoration of facilities on Guam which were damaged or destroyed by Typhoon Pamela.

The program supports the restoration of facilities at Andersen Air Force Base, the Andersen South Annex, the satellite tracking station 8 miles from Andersen, the transmitter site at Barrigada and remote navigational aids on the islands. The estimated cost for renovation is \$49,003,000 divided as follows:

Facilities -----	\$26, 622, 000
Family housing-----	22, 381, 000
Total -----	<u>49, 003, 000</u>

EFFECTS OF TYPHOON PAMELA

Before going any further into details of the program, I would like to provide some details on the force of the typhoon and the cause of damage to our facilities.

The full force of Typhoon Pamela struck the island on May 21, 1976, causing millions of dollars in damage to facilities, equipment and personal property, both military and civilian. The storm had maximum winds exceeding 145 knots with sustained winds greater than 100 knots for 7 hours and rainfall of 22.6 inches.

Damage resulted from a number of causes. One was the direct force of the wind which toppled antennas, snapped utility poles, overturned vehicles, tore roof and wall panels from buildings, forced the failure of structural members, sheared roof ventilators, buckled metal rollup doors, blew in windows and wooden wall panels and blew away furnishings and small equipment. Another was the effect of flying debris which severed power and communication lines, lodged against poles and fences causing a sail effect which buckled them, ripped and gouged roofs, broke windows and chipped and gouged and collapsed building walls and doors.

The tremendous amount of wind-driven rain then soaked and ruined furnishings, equipment and personal property, flooded buildings, shorted out transformers, switches and motors. Major secondary damage resulted from the extended loss of electric power.

PROPOSED REHABILITATION PROGRAM

In preparing the proposed program, full consideration has been given to the damage effects and causes. All permanent concrete or masonry building withstood the storm structurally. Metal sheathed steel frame buildings were severely damaged, some structurally. With the exception of three aircraft nosedocks, damaged metal buildings are being replaced using concrete or masonry. This type of construction coupled with the placement of utility lines underground is the basic premise of our program to minimize damage from any future storm.

A corollary action is to seal the family housing units to prevent entry of heavy wind driven rain which flooded the quarters and resulted in severe personal loss. We wish to assure you and the committee that this program represents a thoroughly reviewed listing of requirements providing only for the restoration of storm damage while minimizing potential future damage.

The Air Force has scrutinized requirements and is only requesting facility restoration to support the end mission. Attached to the printed copies of my statement are project justification sheets containing narrative descriptions of the entire program broken out by category of facilities.

Mr. Chairman, I thank you for the opportunity to appear before this committee. If there are any questions about our program, we would be pleased to provide additional answers and information.

PREPARED STATEMENT

Senator INOUE. Thank you very much, General. We will insert your prepared statement in the record at this point.

[The statement follows:]

MR. CHAIRMAN, AND MEMBERS OF THE COMMITTEE, IT IS A PLEASURE TO APPEAR BEFORE YOU TO PRESENT THE AIR FORCE CONSTRUCTION PROGRAM FOR RESTORATION OF FACILITIES ON GUAM WHICH WERE DAMAGED OR DESTROYED BY TYPHOON PAMELA.

THE PROGRAM SUPPORTS THE RESTORATION OF FACILITIES AT ANDERSEN AFB, THE ANDERSEN SOUTH ANNEX, THE SATELLITE TRACKING STATION EIGHT MILES FROM ANDERSEN, THE TRANSMITTER SITE AT BARRIGADA AND REMOTE NAVIGATIONAL AIDS. THE ESTIMATED COST FOR RENOVATION IS \$49,003,000 DIVIDED AS FOLLOWS:

FACILITIES	\$26,622,000
FAMILY HOUSING	<u>\$22,381,000</u>
	\$49,003,000

BEFORE GOING ANY FURTHER INTO DETAILS OF THE PROGRAM, I WOULD LIKE TO PROVIDE SOME DETAILS ON THE FORCE OF THE TYPHOON AND THE CAUSE OF DAMAGE.

THE FULL FORCE OF TYPHOON PAMELA STRUCK THE ISLAND ON MAY 21, 1976 CAUSING MILLIONS OF DOLLARS IN DAMAGE TO FACILITIES, EQUIPMENT AND PERSONAL PROPERTY, BOTH MILITARY AND CIVILIAN, THE STORM HAD MAXIMUM WINDS EXCEEDING 145 KNOTS WITH SUSTAINED WINDS GREATER THAN 100 KNOTS FOR SEVEN HOURS AND RAINFALL OF 22.6 INCHES. DAMAGE RESULTED FROM A NUMBER OF CAUSES, ONE WAS THE DIRECT FORCE OF THE WIND WHICH TOPPLED ANTENNAS, SHAPPED UTILITY POLES, OVERTURNED VEHICLES, TORE ROOF AND WALL PANELS FROM BUILDINGS, FORCED THE FAILURE OF STRUCTURAL MEMBERS, SHEARED ROOF VENTILATORS, BUCKLED METAL ROLL-UP DOORS, BLEW IN WINDOWS AND WOODEN WALL PANELS AND BLEW AWAY FURNISHINGS AND SMALL EQUIPMENT. ANOTHER WAS THE EFFECT OF FLYING DEBRIS WHICH SEVERED POWER AND COMMUNICATION LINES, LODGED AGAINST POLES AND FENCES CAUSING A SAIL EFFECT WHICH BUCKLED THEM, RIPPED AND GOUGED ROOFS, BROKE WINDOWS AND CHIPPED AND GOUGED AND COLLAPSED BUILDING WALLS AND DOORS.

THE TREMENDOUS AMOUNT OF WIND DRIVEN RAIN THEN SOAKED AND RUINED FURNISHINGS, EQUIPMENT AND PERSONAL PROPERTY, FLOODED BUILDINGS, SHORTED OUT TRANSFORMERS, SWITCHES AND MOTORS. MAJOR SECONDARY DAMAGE RESULTED FROM THE EXTENDED LOSS OF ELECTRIC POWER.

IN PREPARING THE PROPOSED PROGRAM, FULL CONSIDERATION HAS BEEN GIVEN TO THE DAMAGE EFFECTS AND CAUSES. ALL PERMANENT CONCRETE OR MASONRY BUILDINGS WITHSTOOD THE STORM STRUCTURALLY. METAL SHEATHED STEEL FRAME BUILDINGS WERE SEVERELY DAMAGED, SOME STRUCTURALLY. WITH THE EXCEPTION OF 3 AIRCRAFT NOSEDOCKS, DAMAGED METAL BUILDINGS ARE BEING REPLACED USING CONCRETE OR MASONRY. THIS TYPE OF CONSTRUCTION COUPLED WITH THE PLACEMENT OF UTILITY LINES UNDERGROUND IS THE BASIC PREMISE OF OUR PROGRAM TO MINIMIZE DAMAGE FROM ANY FUTURE STORM. A COROLLARY ACTION IS TO SEAL THE FAMILY HOUSING UNITS TO PREVENT ENTRY OF HEAVY WIND DRIVEN RAIN WHICH FLOODED THE QUARTERS AND RESULTED IN SEVERE PERSONAL LOSS. WE WISH TO ASSURE YOU AND YOUR COMMITTEE THAT THIS PROGRAM REPRESENTS A THOROUGHLY REVIEWED LISTING OF REQUIREMENTS PROVIDING ONLY FOR THE RESTORATION OF STORM DAMAGE WHILE MINIMIZING POTENTIAL FUTURE DAMAGE. THE AIR FORCE HAS SCRUTINIZED REQUIREMENTS AND IS ONLY REQUESTING FACILITY RESTORATION TO SUPPORT THE END MISSION. ATTACHED TO THE PRINTED COPIES OF MY STATEMENT ARE PROJECT JUSTIFICATION SHEETS CONTAINING NARRATIVE DESCRIPTIONS OF THE ENTIRE PROGRAM BROKEN OUT BY CATEGORY OF FACILITIES. I WOULD LIKE AT THIS TIME TO GIVE A SHORT OVERVIEW BRIEFING ON THE STORM AND THE DAMAGE THAT WAS INCURRED.

CONCLUSION

MR. CHAIRMAN, I THANK YOU FOR THE OPPORTUNITY TO APPEAR BEFORE THIS COMMITTEE. IF THERE ARE ANY QUESTIONS ABOUT OUR PROGRAM, WE WILL BE PLEASED TO PROVIDE ADDITIONAL INFORMATION.

DEPARTMENT OF THE AIR FORCE
 MILITARY CONSTRUCTION PROGRAM
 FISCAL YEAR 1977 TO SUPPLEMENTAL
INDEX

<u>BASE</u>	<u>ITEM</u>	<u>AMOUNT</u>	<u>PAGE</u>
Andersen	Restoration and Replacement of Facilities	\$ 26,622,000	3
Andersen	Typhoon Repair Military Family Housing	\$ 20,121,000	7
Andersen	Typhoon Repair, Military Family Housing, Furnishings	\$ 2,260,000	9
TOTAL		\$ 49,003,000.	

1. DATE		3. DEPARTMENT AF		9. INSTALLATION ANDERSEN AIR FORCE BASE	
4. COMMAND OR MANAGEMENT BUREAU		6. INSTALLATION CONTROL NUMBER		8. STATE/COUNTRY	
STRATEGIC AIR COMMAND		AJJY		GUAM	
7. STATUS ACTIVE		9. YEAR OF INITIAL OCCUPANCY 1945		10. NEAREST CITY 11 MILES NORTHEAST OF AGANA, GUAM	
11. MISSION OR MAJOR FUNCTIONS AIR DIVISION HEADQUARTERS HEAVY BOMBARDMENT SQUADRON WEATHER RECONNAISSANCE SQUADRON (MILITARY AIRLIFT COMMAND)		PERSONNEL STRENGTH		STUDENTS SUPPORTED	
		OFFICER (1) ENLISTED CIVILIAN (2) TOTAL (1+2)		OFFICER (3) ENLISTED CIVILIAN (4) TOTAL (3+4)	
a. AS OF 30 June 76		420 3252 775 0		215 109 0 4771	
b. PLANNED (End FY 82)		419 3162 768 0		215 109 0 4673	
12. LAND		ACRES (1)		IMPROVEMENT (\$000) (2)	
a. OWNED		16,140		151,997	
b. LEASES AND EASEMENTS		238		0	
c. INVENTORY TOTAL (Except land held as of 10 June 1976)		1		1	
d. AUTHORIZATION NOT YET IN INVENTORY					
e. AUTHORIZATION REQUESTED IN THIS PROGRAM					
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS					
g. GRAND TOTAL (c + d + e + f)				237,047	
14. SUMMARY OF INSTALLATION PROJECTS					
PROJECT DESIGNATION		AUTHORIZATION PROGRAM		FUNDING PROGRAM	
15. CATEGORY CODE NO.	16. PROJECT TITLE	17. TENANT COMMAND	18. UNIT OF MEASURE	19. ESTIMATED (\$000)	20. ESTIMATED (\$000)
	MILITARY CONSTRUCTION		LS	26,622	26,622
	FAMILY HOUSING		LS	22,381	22,381
	TOTAL			49,003	49,003

1. DATE	2. FISCAL YEAR	3. MILITARY CONSTRUCTION PROJECT DATA (Continued)	4. DEPARTMENT	5. INSTALLATION
	1977 TQ		AF	ANDERSEN AIR FORCE BASE
6. PROJECT NUMBER				
7. PROJECT TITLE				
8. RESTORATION AND REPLACEMENT OF FACILITIES				
Category Code		Title	(\$000) Cost	Description
120-000		Restore POL Facilities	3,072	Provide protective coating on pipeline and tanks, flood proof hydrant and transfer pumphouses, repair damaged structures, lighting and tank farm dikes.
130-000		Restore Communications and Airfield Lighting	64	Provides replacement of 4 VASI light units, Doors/Louvers on the Comm Tnttr and Revr buildings and wiring, piping, installing 3 generators and control panel in Bldg 23002 (Comm Relay Center).
130-000		Restore Remote Communications/Navigational Aids	267	Provides for repair of the VOR ground screen, repair and stormproofing of the Barrigada Transmitter Site, replacement of antennas, repair and stormproofing of the TACAN facility.
140-000		Restore Operations and Training Facilities	439	Repair roof, windows and window frames, doors and electrical repairs in control tower, squadron operations, flight simulator and security police control point. Replace aircraft arresting barriers. Reconstruct small arms range. Paint.
210-000		Restore Maintenance Facilities	1,973	Repair roof, door repair/replacement, replace siding, electrical repair, and protective coating for four maintenance shops and three maintenance docks. Remove maintenance dock which was damaged beyond economical repair. Replace three maintenance shops.
310-000		Restore/Alter Satellite Tracking Station	300	Provides structural repairs, interior building repair, security fence repair/replacement, security lighting repair, stairway enclosure, improved site drainage, improved water distribution, relocation of power distribution underground and relocation of electrical switch gear.

1. DATE	2. FISCAL YEAR	3. MILITARY CONSTRUCTION PROJECT DATA (Continued)		4. INST. ALLATION
	1977 TQ			ANDERSEN AIR FORCE BASE
5. PROJECT NUMBER		6. PROJECT TITLE		
		RESTORATION AND REPLACEMENT OF FACILITIES		
Category Code	Title	(\$000) Cost	Description	
550-143	Restore Dispensary	120	Repair roof, ventilators, exhaust fans, doors, windows and window frames. Replace interior electric fixtures and carpet. Paint.	
610-000	Restore Administrative Facilities	1,378	Provides storm damage repair and stormproofing of the Division Headquarters and replacement with masonry construction of the destroyed metal frame and siding Commercial Transportation Facility.	
610-249	Restore/Alter Wing Headquarters	3,170	This will provide interior and exterior repairs to the 124,639 SF building and provide stormproofing to prevent water damage from future storms. Ceilings and floor coverings must be replaced. Louvered walls and jalousie type windows will be replaced with masonry units and conventional windows. Damaged partitions and restrooms will be repaired. Complete interior painting is required. Replacement of interior lighting and general electrical rehab is required. The closing up of louvered openings for stormproofing requires the installation of a central air conditioning unit. This would replace the multitude of window units now in use.	
720-000	Restore Bachelor Housing and Dining Hall	6,876	Repair/replace roofs, wall louvers, windows and window frames, doors, latrines, ceilings, and floors. Replacement of interior lighting and general electrical rehab is required. Paint. (12 facilities require restoration).	

1. DATE	2. FISCAL YEAR	3. PROJECT NUMBER	4. DEPARTMENT	5. INSTALLATION
	1977 TQ		AF	ANDERSEN AIR FORCE BASE
MILITARY CONSTRUCTION PROJECT DATA (Continued)				
8. PROJECT NUMBER	6. PROJECT TITLE	(\$000) Cost	Description	
740-000	Restore Community Facilities Indoor	3,332	This line item will provide for storm damage repair and stormproofing for 11 buildings and the replacements with masonry construction of 3 metal frame and metal siding buildings which were destroyed. Included is a 5,153 SF addition to the commissary sales store closing in the produce reefer area where the existing unprotected reefers were destroyed.	
750-000	Restore Community Facilities Exterior	188	Regrade athletic fields, repair light standards and wiring, reinstall fences and backstops. Remove and replace damaged portions of buildings. (Softball, baseball and football fields; tennis courts; outdoor theatre; golf club house and outdoor pavillion).	
810-000	Electrical Distribution and Generating Systems	2,485	Replace overhead distribution lines with underground system. Replace streetlights and floodlights. Repair 20 megawatt power generating plant. Provide new feeder to substation. Repair/replace emergency generators.	
840-000	Water Supply and Distribution	591	Provide emergency power generating units and masonry enclosures for the water wells at Andersen Annex. Replace inoperative gate valve at Santa Rosa Reservoir.	
872-000	Replace Fencing	395	Repair and replace eight-foot high chain link security fencing.	

1. DATE 18 Jun 76		2. FISCAL YEAR FY 1977		3. DEPARTMENT AF				4. INSTALLATION ANDERSEN AIR FORCE BASE	
5. PROPOSED AUTHORIZATION \$ 20,121,000		6. PRIOR AUTHORIZATION P.L.		7. CATEGORY CODE NUMBER 711-111/143/144		8. PROGRAM ELEMENT 8-80-11		9. STATE/COUNTRY GUAM, MARIANA ISLAND	
10. PROPOSED APPROPRIATION \$ 20,121,000		11. BUDGET ACCOUNT NUMBER		12. PROJECT NUMBER		13. PROJECT TITLE TYPHOON REPAIR MILITARY FAMILY HOUSING			
SECTION A - DESCRIPTION OF PROJECT									
14. TYPE OF CONSTRUCTION									
15. PHYSICAL CHARACTERISTICS OF PRIMARY FACILITY									
16. WORK TO BE DONE									
17. TYPE OF WORK									
18. REPLACEMENT									
19. TYPE OF DESIGN									
20. STANDARD DESIGN									
21. SPECIAL DESIGN									
22. DRAWING NO.									
23. QUANTITATIVE DATA									
24. TOTAL REQUIREMENT									
25. EXISTING SUBSTANDARD									
26. ADEQUATE									
27. UNDEB. NOT IN INVENTORY									
28. ADEQUATE ASSETS (E+D)									
29. UNANNUED PRIOR AUTHORIZATION									
30. INCLUDED IN FY PROGRAM									
31. DEFICIENCY (A+B+E+D)									
32. RELATED PROJECTS									
SECTION B - COST ESTIMATES									
30. PRIMARY FACILITY									
31. SUPPORTING FACILITIES									
32. TOTAL PROJECT COST									
SECTION C - BASIS OF REQUIREMENT									
PROJECT: Project provides for restoration of family housing units and related electrical distribution system damaged or destroyed during a typhoon on 21 May 76. The storm consisted of winds exceeding 145 knots with sustained winds in excess of 100 knots for 7 hours. Total rainfall was 22.6 inches.									
REQUIREMENTS: To restore all MFH to a livable condition and provide adequate typhoon-proof electric power to the housing areas.									
CURRENT SITUATION: High winds and blowing debris, such as trees, metal, car doors, etc., damaged louvers and screens, foam roofs, doors and door frames. Old cracks were opened in the roofs and exterior walls, exterior wall surfaces were scarred and scratched and require repainting/sealing, party walls caved in due to falling and blowing trees. All wooden door frames and other wooden members were loosened or pulled from the facility by high winds. Large amounts of water entered through the louvers causing considerable damage to floor tiles and kitchen cabinets. Floor tiles are curling up and cabinet doors are warped									

1. DATE	2. FISCAL YEAR	3. MILITARY CONSTRUCTION PROJECT DATA (Continued)	4. DEPARTMENT	5. INSTALLATION
		MILITARY CONSTRUCTION PROJECT DATA (Continued)	AF	ANDERSEN AIR FORCE BASE
6. PROJECT NUMBER		7. PROJECT TITLE		
		TYPHOON REPAIR MILITARY FAMILY HOUSING		
Continued from Block 25:				
<p>or coming apart. The sliding glass doors are not constructed with tempered glass and many blew apart. Existing overhead electrical distribution system in the housing area was extensively damaged by high winds which exceeded 145 knots and by flying debris. At least 90% of all lines were broken, cut, or blown completely away. Many of the power line poles were broken or uprooted and strewn across the ground. Insulators were cracked, chipped, or stripped from the cross arms. Pole mounted transformers were destroyed as poles broke, or transformers were loosened from their brackets, and fell to the ground. Salt deposits on insulators are a constant problem and cause maintenance problems not associated with most bases in the CONUS. Replacement with an underground system will preclude such damage from future typhoons.</p>				
<p>1. Repair: Accomplish necessary repair work to 1454 military family housing units required as a result of damage caused by typhoon Pamela. Work includes repairing damaged roofs, replacing floor tile, SIOH 603,000 restoring kitchens and bathrooms using modern materials and amenities, replacing exterior doors DESIGN 452,000 and frames, repairing cracks in exterior and interior walls, replacing sliding glass doors and \$16,132,000 frames. In addition, replace louvers and screens with concrete block and windows and provide typhoon panels for future protection of windows.</p>				
<p>2. Electrical Distribution System: Replace damaged and destroyed pole hung transformers with pad mounted units. Replace damaged street light poles. Repair by replacement primary and secondary electrical distribution lines. New lines are to be buried cable. Existing ducts will be utilized where available.</p>				
				TOTAL
				\$ 3,728,000
				149,000
				DESIGN 112,000
				\$ 3,989,000
				\$20,121,000

1. DATE July 1976	2. FISCAL YEAR 1977 1Q	MILITARY CONSTRUCTION PROJECT DATA			3. DEPARTMENT AF	4. INSTALLATION Andersen Air Force Base		
5. PROPOSED AUTHORIZATION \$ 2,260,000		6. PRIOR AUTHORIZATION P.L.	7. CATEGORY CODE NUMBER P-721	8. PROGRAM ELEMENT NUMBER 8-80-25	9. STATE/COUNTRY Guam, Mariana Island			
10. PROPOSED APPROPRIATION \$ 2,260,000		11. BUDGET ACCOUNT NUMBER		12. PROJECT NUMBER				
SECTION A - DESCRIPTION OF PROJECT								
13. PROJECT TITLE Typhoon Repair, Military Family Housing								
SECTION B - COST ESTIMATES								
20. PRIMARY FACILITY								
14. TYPE OF CONSTRUCTION		18. PHYSICAL CHARACTERISTICS OF PRIMARY FACILITY			U/M	QUANTITY	UNIT COST	COST (6000)
a. PERMANENT	b. NO. OF BLDGS	c. LENGTH	d. WIDTH	e. NO. OF STORIES	f. GROSS AREA			
g. TEMPORARY	f. DESIGN CAPACITY	CAP.		19. DESCRIPTION OF WORK TO BE DONE				
15. TYPE OF WORK		Replace furnishings damaged by wind and water, \$1,342,000; remove damaged furnishings, take inventory and repair salvageable items, \$918,000.						
16. REPLACEMENT								
17. TYPE OF DESIGN								
18. SPECIAL DESIGN								
19. DRAWING NO.								
21. SUPPORTING FACILITIES								
a.								
b.								
c.								
d.								
e.								
f.								
g.								
h.								
i.								
j.								
22. TOTAL PROJECT COST								\$ 2,260
SECTION C - BASIS OF REQUIREMENT								
23. QUANTITATIVE DATA (U/M)								
25. REQUIREMENT FOR PROJECT								
PROJECT: Repair and replace furnishings that were damaged or destroyed during a typhoon on 21 May 1976. The storm consisted of winds exceeding 145 knots, with sustained winds in excess of 110 knots for seven hours. Total rainfall was 22.6 inches.								
REQUIREMENT: Replace furnishings, \$1,342,000; fund overhires to remove damaged furnishings, take inventory and repair salvageable items.								
CURRENT SITUATION: Furniture and furnishings were damaged or destroyed by wind and water that, at times, flowed freely through the units.								
24. RELATED PROJECTS								

JOINT QUESTIONING OF WITNESSES

ADEQUACY OF REQUEST

Senator INOUE. Thank you very much, General.

Before I proceed with the questioning, considering that the typhoon happened in May of this year which gave you, obviously, very little time for formal planning and design, what level of confidence do you have that the request is an adequate one to accomplish the required repair?

Mr. FLIAKAS. Mr. Chairman, we rely, of course, on the engineering teams of the Pacific Division of the Naval Facilities Engineering Command and the Air Force teams that visited the island and made a thorough survey and engineering review of the requirements. It took perhaps 60 days to refine the estimates and develop the requirements. In some instances the scope was changed to accommodate to the actual need rather than to replace in kind those structures that were damaged or destroyed.

We submitted the supplemental request on July 29, about 60 days after the storm damage. We think that the estimates have been reviewed thoroughly. They have expert engineering input from both the headquarters as well as the engineering staffs of the Navy and Air Force. We feel that they are as good or as close to perhaps 90 or 95 percent of the estimates that would be normally submitted in a regular military construction program.

CHANGES IN SPECIFIC NEEDS

Senator INOUE. Have you received any information since the submission of the request which would indicate a change in your needs?

Mr. FLIAKAS. I will defer to Admiral Marschall or General Gilbert.

Admiral MARSCHALL. To the best of my knowledge, Mr. Chairman, there has been no change in the specific need. The architect/engineering firms which will do the detailed plans and specifications for this work have been chosen and will go to work shortly. I think that as we develop the specific plans, we will find that there will be deviations as far as method that we might want to use or materials or whatever, but in general I think that the basic requirements have been stated properly and will be as presented to the Congress.

General GILBERT. The Air Force has not received anything to date, Mr. Chairman, that would cause us to change the program as in the Congress.

NEED FOR SPECIFIC AUTHORIZING LEGISLATION

Senator INOUE. My question is a rather technical one so I shall read it carefully. It is the committee's understanding that the authorization requested is for the full amount of the supplemental, even though certain efforts, such as the planning, are permanently authorized in law. It would also seem that most of the supplemental projects fall within the authorizing provisions of 2673 of Title 10 United States Code which deals with responses to natural disasters. Would you please clarify why the Department felt it necessary to request specific authorizing legislation for the total?

Mr. FLIAKAS. Mr. Chairman, it is primarily because of the size, the sheer magnitude of the program required to make the necessary re-

pairs and restoration. It is certainly true, as indicated in your question, that we have standing legislation for what we call acts of God. These are used for instances such as a fire damaged facility or a structural damaged facility in cases that are on an isolated basis. One of the inhibiting requirements for the use of the 2673 authority is the fact that you need to reprogram funds and to absorb them, so to speak, in order to accomplish the project.

Because of the magnitude of the damage, some \$144 million is required for this effort. We believe that we should provide a total authorization and appropriation request. While we have authorized the military departments to proceed with advance design work, it is intended that we would recoup and restore those funds used in that effort when we get the appropriation.

So my answer, sir, is this: That because of the magnitude and because of our desire to inform the Congress of the total effort required in this area, it was determined by the Administration, by the Department of Defense and by the Office of Management and Budget that the President should seek a supplemental request in its entirety.

REPAIR WORK ALREADY ACCOMPLISHED

Senator INOUE. Since much of the storm damage obviously required immediate attention, you must have done some repair work already.

Mr. FLIAKAS. Yes.

Senator INOUE. Would you indicate to the committee that portion of the work that has already been accomplished and the projects which require funding?

Mr. FLIAKAS. To my knowledge, Mr. Chairman, no facility has been reconstructed. There have been enormous efforts using available funds for the cleanup and for the temporary fixes or repair necessary to make livable and habitable the facilities that were destroyed.

DIVERTING OF FUNDS FROM OTHER SOURCES

Senator INOUE. Where did the funding come from?

Mr. FLIAKAS. We used the available operation and maintenance funds that were diverted from other requirements, primarily from the real property maintenance requirements.

Senator INOUE. How do you propose to replenish these funds?

Mr. FLIAKAS. We would not be able to recoup those funds because of the yearend funding aspects and the fact that operation and maintenance funding does expire at the end of the fiscal year. In effect what we are saying is that we just have to defer and divert funds from other areas in order to do the minimum necessary to make the facility livable.

Senator INOUE. Does this include that amount?

Mr. FLIAKAS. No, sir, it does not.

NEGOTIATION OF MAJOR CONSTRUCTION CONTRACTS

Senator INOUE. The negotiation of major construction contracts takes time and funds appropriated now may not actually be spent until the next calendar year. In this context would there be a major

program impact if the appropriations could not be enacted in the transition quarter but go over to March of next year?

Mr. FLIAKAS. It is intended, Mr. Chairman, that the bulk of these contracts will be awarded early next spring in the March-April-May timeframe. However, it would not be desirable to defer legislation until that time because we have already authorized advance design work. We have diverted funds that were intended to be used for design of projects in the 1977 and 1978 regular military construction programs in order to be able to design the projects. We would thus impact on the entire 1977 and 1978 military construction program if we had deferred legislation.

Senator INOUE. Within this request there is approximately \$8 million for family housing under operation and maintenance. Without disputing the requirement for these funds, the question remains whether or not they can be effectively used since this appropriation expires for the obligation purpose on September 30. Can you comment on that?

Mr. FLIAKAS. Yes, Mr. Chairman. We would require language in the authorization and appropriation acts. I suspect it would be the latter, the appropriation, that would permit us to have these funds available until expired. As you indicated, by the end of the month, we could not obligate and spend all of these funds but with language that we have asked our fiscal and our legal offices to prepare to accompany this appropriation it will permit us to keep these funds.

Senator INOUE. I have no further questions.

Senator Bellmon.

Senator BELLMON. Thank you. I have only a couple of questions I would like to raise.

RESTORATION OF ELECTRIC LINES

In Admiral Marschall's statement reference is made to the replacement of wooden electrical poles, utility poles with concrete and with putting in guy wires. I am curious. I believe General Gilbert mentioned putting them under ground. Can't you put all the electric lines under ground?

Admiral MARSCHALL. We could at a great price, Senator Bellmon. We cannot give you a specific figure as to the relative cost of below ground versus above ground, but it ranges somewhere between 6 to 1 and 10 to 1 in cost.

Now one of the great problems that we had in this recent typhoon was wooden poles which snapped. We did have some concrete poles which withstood the typhoon very well. The real severe problem is when flying debris cuts the wires. This can be handled reasonably well by linecrews that get out very quickly after the storm. We are talking in the Navy program about 275 miles of transmission lines which would be prohibitively expensive to put under ground.

SUBTERRANEAN INSTALLATION OF AIR FORCE LINES

Senator BELLMON. Apparently the Air Force plans to put theirs under ground.

General GILBERT. Yes.

Admiral MARSCHALL. We are talking about transmission at very high voltages and a great deal of line mileage. The Air Force, on the other hand, is talking about distribution within Andersen Air Force Base and at a much lower voltage General Gilbert will explain further.

General GILBERT. Yes. First it has been the Air Force plan and we have carried that out all along to put our electrical distribution system at Andersen underground. No wit is true that this program would furnish Andersen Air Force Base with an underground electrical distribution system. What makes ours more cost effective than the Navy's is we would only be running about 5 miles of primary distribution underground. The remainder of it would be direct burial overhead and that is very competitive in price with the cost of going overhead versus underground. As a matter of fact, in the satellite area, as an example, it is our estimate that to bury that cable underground is about \$9.22 a linear foot and to put it overhead comes out at \$9 a linear foot. So actually it is very competitive in price to go underground.

MAIN TRANSMISSION LINES

Senator BELLMON. What about your main transmission lines?

General GILBERT. Sir, that is 5 miles of line only.

Senator BELLMON. What is the relative cost for burying and overhead?

General GILBERT. That is \$54 a foot underground versus our estimate of about \$16 overhead.

Senator BELLMON. Three to one.

General GILBERT. Yes, sir.

Senator BELLMON. Why does it cost the Navy more?

Admiral MARSCHALL. Again we are talking about great lengths.

Senator BELLMON. I think that would cheapen it if he is doing 5 miles and you are doing several hundred miles.

Admiral MARSCHALL. He knows what the subsurface conditions are. He has a very limited area. We are talking about the whole length of the Island of Guam which includes in some cases hard rock, and in other places high water table, which makes it very expensive for burying cable. As I said, I can't give you a specific estimate, because we didn't run an estimate. We know that it would be considerably more expensive, and that it would be prohibitive.

FREQUENCY OF HURRICANES ON GUAM

Senator BELLMON. How frequent are these hurricanes? I was on Guam not too many years ago and they had one that just snapped off utility poles in 1962.

Admiral MARSCHALL. Right, Typhoon Karen in 1962.

Senator BELLMON. As differentiated from 1976.

Admiral MARSCHALL. The history of typhoons shows that about every 10 years on Guam, they have a very severe one and just about every year they have some cyclonic disturbance.

Senator BELLMON. It seems to me that when you repair it you ought to put it back into a shape where this won't happen.

Admiral MARSCHALL. This we hope to do.

Senator BELLMON. With above ground lines?

Admiral MARSCHALL. Yes, sir. I don't think burial is really necessary. We made a study of the benefits of above ground versus underground. There are some benefits but we feel in the total picture, because of the length of the transmission lines, we could ill afford to come to you and say direct burial is totally cost effective. First of all, if you have faults underground, you have to find them, dig them out, and repair them. Maintenance might be a problem in times other than typhoons.

Senator BELLMON. I am not in the utility business but I think you are going to find domestic utility companies are increasingly going to underground transmission. They have apparently learned how to cope with those problems.

Admiral MARSCHALL. Long haul.

Senator BELLMON. Well, 200 miles is not exactly long haul.

Admiral MARSCHALL. When you consider the cost differential, we just felt that it was a better engineering solution for the transmission lines.

General GILBERT. Conversely at Andersen Air Force Base we have had very good success with that portion of the system that is now underground. In addition, after this storm we were able at Andersen to get service back within 4 days where we had underground versus up to 14 days where we had overhead distribution system. Admittedly it is a much more confined area but that is why we think that it is cost effective.

AVAILABILITY OF EMERGENCY FUNDS FROM SERVICES

Senator BELLMON. I thank the chairman, I got into this and I don't want to belabor it too much but do the services have emergency funds to cope with these kinds of acts of God? You mentioned you use O. & M. funds.

Mr. FLIAKAS. We use the O. & M. funds for the necessary cleanup, the immediate aftermath of the storm. With respect to the emergency funds, yes, we have emergency authorization but not funds. In each case we have to reprogram and absorb the funds necessary to divert into those projects so it has been rather limited. Our application has been extremely limited. We do have other authorization as well but in an emergency it does not cover acts of God.

We have the \$10-million authorization for each service that permits us to use available funds for unprogramed, unforeseen emergency type projects. Usually it is related to a change in mission or to a security requirement having to do with communications or intelligence where we advise the Congress of our requirement and seek to reprogram funds into that. Again the reason for the supplemental is because of the sheer magnitude of the \$144 million.

Senator BELLMON. This storm occurred in May, it is now September. By the time you get the contracts let it will be more than a year, I would assume, before you really get underway.

Mr. FLIAKAS. We expect to let the contracts early next spring. We have authorized advance planning and design. That is ongoing now.

Senator BELLMON. If you had had available a sum perhaps not adequate for the whole job, would it have resulted in a savings in total final cost?

Mr. FLIAKAS. We have an escalation factor on Guam which is a high construction cost area. We have included a 1-percent-a-month escalation factor, so for every month that we delay it does cost us a considerable amount of money.

TEN-YEAR COMPARISON OF REPAIR COSTS ON GUAM

Senator BELLMON. Do you have or could you get figures showing what the annual cost for these kinds of repairs efforts are, say, over the last 10 years?

Mr. FLIAKAS. Well, we could give you a comparative analysis perhaps of like projects. A few years ago there was as much as a 30-percent inflation factor in Guam. The Japanese were building a number of resort hotels and the economic situation on Guam was such that it was very prohibitive for us to program construction. That has now changed considerably in the last year or so. As a matter of fact, the economy has been considerably depressed. While certainly we don't consider this fortuitous, it is considered that this amount of damage and this amount of construction effort will considerably help the economy in Guam. Of course the civilian sector sustained a considerable amount of damage also but we will provide to the committee a review of the costs over a period of time to show comparisons.

Senator BELLMON. Those are all the questions I have.

REPAIR, REPLACEMENT, AND RESTORATION

Senator INOUE. You use three words: "repair, replacement, and restoration" Would you define those because they are used quite often.

Mr. FLIAKAS. Well, perhaps I could start this and then if it leads to a technical need why I can rely on my staff. From our standpoint repair is the normal work that is done on an everyday basis to maintain and to upkeep the facilities normally done on a routine basis. Restoration, of course, is complete—

REPAIR

Senator INOUE. In the context of your presentation, what do you mean by repair? This is not normal repair.

Mr. FLIAKAS. In some facilities that sustained damage, repairs can be made that would make the structure usable. Most of our housing, for example, that is masonry and concrete construction came through structurally very well but the windows and the door jambs sustained heavy damage. Perhaps I am getting too far afield here but I would consider that repair. Wouldn't you?

Admiral MARSCHALL. Yes.

General GILBERT. Yes.

RESTORATION AND REPLACEMENT

Mr. FLIAKAS. Whereas some of those photographs that you saw of the gymnasium which sustained such heavy damage that it had to be demolished because it is no longer safe and structurally sound, then I would call that restoration or actual replacement.

Senator INOUE. Which one is it?

Mr. FLIAKAS. That would be replacement obviously. Restoration I would guess is somewhere in between. Is that right?

Admiral MARSCHALL. I find it difficult to decide which way you would go there. Restoration, for example, on the Glass breakwater is probably a good expression. The breakwater is armored with these huge 20-ton blocks of rock. Several of them were washed out to sea, and then the finer materials were carried away by the water. We hope to restore the breakwater to its previous condition which was more satisfactory.

Senator INOUE. I asked because if it is confusing to you, you can imagine what it is to me.

Admiral MARSCHALL. Yes.

Senator INOUE. I am trying to distinguish what the difference is between restoring and replacing. When you say restore the gym, for example, do you bring it back to its original shape?

Admiral MARSCHALL. No, replace the gymnasium with a firmer structure.

Senator INOUE. But if you restore, you restore it back to its original condition.

Admiral MARSCHALL. That would be my interpretation of it, yes, sir.

HOUSING

Senator INOUE. All right.

You have \$12 million for door and window frames. Why does it cost that much?

Admiral MARSCHALL. We had 1,554 units of housing which were severely damaged.

Senator INOUE. One thousand dollars per unit for windows?

Admiral MARSCHALL. More than that probably. What happened there was that in many cases we had жалousies and open circulation. What we propose to do now is to reduce the size of the windows, which will involve certain structural work in the quarters. When another typhoon comes along we will be a lot better off as far as protection is concerned. I have been shocked myself, even though I am in this business, at the cost of replacement and repair. We have estimated this on the basis of experience on Guam with the various types of construction which we are asking in this supplemental request, and it is expensive.

General GILBERT. That is the same with the Air Force program with regards to family housing, Mr. Chairman. Doors, windows and closing up some of the open areas and yet provide ventilation to the home occupant. The majority of our 1,400 odd units suffered window and doors damage to the extent that is just not repairable but we must replace it.

BACHELOR ENLISTED HOUSING FACILITIES

Senator INOUE. In your request, you have an item of \$6.9 million for the restoration of 12 bachelor enlisted housing facilities. Does that mean you are going to go back to your original configuration?

General GILBERT. Yes, sir. The Air Force has elected not to bring forward any upgrading projects as a result of the storm.

Senator INOUE. You will modernize?

General GILBERT. No, sir.

Senator INOUE. You will have air-conditioning, if necessary?

General GILBERT. The bachelor quarters are already air-conditioned.

Senator INOUE. Do you have any questions?

Senator STEVENS. Senator Bellmon has been here longer than I have.

Senator BELLMON. I have finished.

COMPLETED WORK

Senator STEVENS. I am sorry to be late, I was at another meeting.

How much of this work has been done already?

Admiral MARSCHALL. Not a great deal.

Senator STEVENS. Is there some sort of funding arrangement to allow work to proceed?

Admiral MARSCHALL. We have used, particularly in the family housing area, almost \$2 million of funds which were available to the Navy from OSD housing funds. When we do this, of course, we take those funds away from the intended use which spreads throughout the Navy's facilities around the world. I think that we have spent about a quarter of a million dollars in Navy operations and maintenance funds, particularly on demolishing structures that were unsafe, cleanup, and that sort of thing.

RETENTION OF EMERGENCY FUND MONEY

Senator STEVENS. Do you keep any portion of your money for an emergency fund?

Admiral MARSCHALL. No, sir.

Mr. FLIAKAS. No, sir. We have, as we explained, existing emergency authorization but no funds for these purposes and we must reprogram when we use that emergency authorization.

REPROGRAMING OF FUNDS

Senator STEVENS. Did you reprogram any funds in this instance?

Mr. FLIAKAS. We did not. We did advance funds for design work or funds for planning and design that we will recoup or reimburse, so to speak, when we get this appropriation. But because of the magnitude of it we were unable to reprogram for that purpose.

Senator STEVENS. Are you going to bid on this?

Mr. FLIAKAS. Yes.

Admiral MARSCHALL. Primarily it will be bid.

Senator STEVENS. What is the time frame for that?

Admiral MARSCHALL. We have seven packages being done by seven different architect/engineering firms. We expect the first packages to be fully complete the first of March. Within those packages, there are some elements, which may be completed earlier. For example, they may have finished the design on the restoration of the bachelor enlisted quarters. In which case, we would go to bid early on that. We tried to separate the packages to make them attractive for firms bidding to do the work. We put like facilities in each package so that some elements of a package may come out earlier, but the bulk of the work will be going to bid somewhere in the March-April timeframe.

ACTIVITIES OF GUAM RESIDENTS SINCE TYPHOON

Senator STEVENS. What have these people been doing since the May typhoon?

Admiral MARSCHALL. There has been a great deal of cleanup and temporary repair. For example, in many cases plywood has been installed across window openings and they make do with what they can. There has been tremendous effort by the occupants of quarters, for example. There has been a great deal of work done by our Seabees in the Navy, the cleanup and demolishing of dangerous structures. I am sure General Gilbert can give you some examples for the Air Force.

General GILBERT. In the case of the Air Force I assure the committee that no work has been done for which funds are now being requested. What has been done is strictly temporary with plywood and patching roofs and under this program we would plan to replace. We have spent about \$3 million in temporary repairs on Andersen on regular facilities and about \$300,000 in family housing on Andersen. If you were to go there today you would see many windows with 4 by 8 sheets of plywood over them awaiting the outcome of this program so that we can make permanent repairs and put in new types of window frames as well as windows that are more typhoon proof today than those that were in prior to this storm.

DELAY IN CONSTRUCTION AND RESTORATION WORK

Senator STEVENS. What concerns me is that you won't even begin construction of the restoration or replacement until about a year after the occurrence. Why has it taken so long?

Admiral MARSCHALL. Because it takes money, sir.

Senator STEVENS. As I recall, we had meetings of this subcommittee after that typhoon and I don't know why this thing didn't move along faster. Why is it we face this request at this time in this Congress when we could have had it by July, I should think, if the typhoon happened in May.

Mr. FLIAKAS. The request by the President was submitted July 29, approximately 60 days after the typhoon. The 60 days was taken by the Navy and the Air Force for the preparation of the estimates.

Senator STEVENS. You put this in the House in July.

Mr. FLIAKAS. The President submitted a request for the supplemental authorization July 29, yes, sir.

STANDBY AUTHORIZATIONS FOR NATURAL DISASTERS

Senator STEVENS. And we have been awaiting authorization since then? Don't you have a standby authorization for this kind of thing?

Mr. FLIAKAS. As I indicated, we do have a standing authorization, the 2673 United States Code that permits us to restore damages through acts of God but we did not have funds. We always must re-program and we must have available funding.

Senator STEVENS. I lived a substantial portion of my life in a territory. If this happened last May, I would have been all over somebody. Facilities certainly would have been under construction before the end of this year. I just wonder whether the delay is because this is an offshore area. My friend here understands what I am talking about.

There does seem to be a substantial delay, not getting to repairing these things or replacing them for a full year. That is inconvenient for a lot of people.

Mr. FLIAKAS. Yes. We have certainly attached a high level of urgency to our request and that might be evidenced by the fact that the President asked for these funds in the transition quarter which started the first of July and expires the 30th of September.

Senator STEVENS. I am addressing my questions to the wrong people. I have to talk to my colleagues on the other side.

Has there been action on this?

Mr. FLIAKAS. No, sir. We have only recently completed hearings, as a matter of fact.

Senator INOUE. I agree with the Defense Department's statement of damages.

Senator BELLMON. Much more than replacing.

Senator INOUE. I understand.

Senator STEVENS. You started to say something.

Mr. HARRINGTON. I just wanted to clarify the existence of the authorization for this type of thing. The authorization which was referred to was relating to an act of God but the legislative history reveals that it was the intent of Congress that it be solely for specific and isolated instances where a building was destroyed by fire, run into by a truck or something of that nature and not for a major natural disaster such as this or an earthquake where you have a tremendous amount of damage.

Mr. FLIAKAS. The House in effect called it disaster relief legislation.

Senator INOUE. I have just been advised that the House Armed Services Committee has reported the bill to the floor but not acted on it. The House Appropriations Committee intends to report the matter today. The Senate Armed Services Committee is scheduled to report the matter to the floor next Wednesday.

Senator STEVENS. I think I will direct my questions to OMB. We will do that and find out why we cannot have a standby authorization for this. I don't see any reason why after a disaster we should have to wait for authorization for disaster repair or replacement. My memory is that we acted much more expeditiously in 1964 when we had an earthquake.

Senator BELLMON. Ask for the figures showing how much money has been spent in these kinds of programs over the last 10 years and we can get from that some kind of idea what kind of standby authorization is in order.

Mr. FLIAKAS. Excuse me. I didn't understand the nature of your question along those lines. As I understood it the question was to provide a comparison of costs to show the cost growth over a 10-year period for like facilities.

If I interpret your question now it is to furnish over the last 10 years those emergency type requirements that we have had of this nature.

Senator BELLMON. Ten years.

Mr. HARRINGTON. Damage from windstorm.

Senator BELLMON. Acts of God.

Mr. FLIAKAS. All right, sir.

Senator STEVENS. We don't want to be faced with an authorization by the time we have a hurricane or typhoon or earthquake. I think that is too much delay. The operation process ought to take care of a faster reaction and it ought to be much quicker.

Senator INOUE. Mr. Secretary, I would like to submit for the record several questions for your consideration and response.

The line of questioning up until now should indicate that this subcommittee—and I think I speak for the full Appropriations Committee—will do everything to expedite this measure but obviously nothing can be done today because of the rule. The Congress very seriously intends to adjourn sine die exactly 2 weeks from this day and therefore the response to this next question, which you have already made, is a very important one.

What effect would it have, if the Congress were unable to favorably respond to your request to provide funds in the transition quarter, and did nothing until the next Congress?

Mr. FLIAKAS. I believe, sir, that it would cause severe hardship on our facility sites and our occupants in both operations as well as habitability and livability requirements. The reason I say that is that even though we don't expect to award the major contracts until next spring, the availability of the funds of course cannot be guaranteed. An inordinate delay would not only impact on Guam but it would impact on the rest of the military construction program because we have already deferred design effort from the 1978 program.

I would like, if I might, to say that we have had an excellent bidding climate throughout the United States especially and we are seeking to execute our programs as expeditiously as possible to take advantage of this good bidding climate. We are concerned that with increasing inflation next year that it could cost the Department of Defense and of course the taxpayer additional millions of dollars by further delay. So it would not only impact on the facilities in Guam, I consider that it would impact on the entire military construction program throughout the United States.

NEW CONSTRUCTION

Senator INOUE. This request involves repairs, restoration, and replacement. Do you have included in this request any new construction?

Mr. FLIAKAS. Yes.

Senator INOUE. Which does not involve replacement, restoration, or repair?

Mr. FLIAKAS. No, sir. No new requirements.

Senator INOUE. You are not including projects that are non-existent at the present time?

Mr. FLIAKAS. No, sir.

Senator INOUE. That is not existent today.

Mr. FLIAKAS. That is correct. There are some instances where there will be no replacement where there is no requirement and other instances we are changing the scope to meet our requirements as we know them today, but we have not programed into this supplemental request requirements that say come before the Congress in the regular military construction program in 1978 or 1979.

Senator INOUE. In your request are you also taking into consideration an increase in the numbers of personnel participating?

Mr. FLIAKAS. No; we have not.

Senator INOUE. Well, for example, I presume you will have some Trident activity there. You would need facilities for personnel.

Mr. FLIAKAS. No, sir.

Admiral MARSCHALL. We have attempted in presenting this program in the Congress to anticipate our requirements on Guam and to the best of my knowledge neither the Navy nor the Air Force has any intent of increasing the numbers of personnel there in the relatively near future, not for 5 years.

General GILBERT. Mr. Chairman, if I might, just to give you an indication of the Air Force program before you, we had 21 buildings destroyed by this storm and we are only asking for replacement of 7 of them. It would be less than fair to the committee to tell you that the storm was the cause of us not needing them any longer. They were not needed in our end mission before and therefore we are not asking for them to be replaced. We have looked into our out-year program and scoped our numbers as well as the size of facilities to meet that out-year program.

Another example is in a transportation building, that is much reduced over what existed prior to the storm. We reduced the scope of it because we do not need that large a building based upon the requirements as we know them today to be in the future for Guam.

PRIORITIES

Senator INOUE. I am not suggesting that the committee will reduce any of your requests, but do you have any priorities? The Congress does not always come forth with every penny requested.

Mr. FLIAKAS. Naturally, sir, we support the request as submitted. In terms of priorities a lot of these facilities are related to community type structure; that is, for our personnel. Most of the operational and training facilities that were damaged in 1962 by Typhoon Karen were of a temporary structure and were replaced with permanent construction at that time. This is a generalization but a large part of the damage this time was inflicted on personnel type facilities and I suppose a priority could be established. As I have indicated, I believe both departments have done a very good job of requesting only what we need, not putting in any more.

Senator INOUE. As some of my colleagues would say, trim the fat.

Mr. FLIAKAS. I believe so.

General GILBERT. It would severely affect the Air Force to get any further reduction. We scrubbed our request very closely and carefully. As an example, the original program that came in to us was \$78 million and we scrubbed it to \$26 million and any further reduction beyond that would begin to seriously affect our ability to accomplish our mission.

BUILDING REPLACEMENTS AND RESTORATIONS

Senator INOUE. I would like to repeat again, you had 21 buildings destroyed, and you are requesting replacement for 7.

General GILBERT. That is right, sir. We had 21 buildings destroyed and we are requesting replacement for 7.

Senator BELLMON. Those seven that you are replacing, will they be hardened structures that won't be destroyed in the future by typhoons?

General GILBERT. All but three, Mr. Bellmon, and those are three nose docks. We think that it is cost prohibitive to make those hardened facilities. However, we do intend to design them to a typhoon criteria which is a 155-mile wind. When we run the cost analysis on it they get very, very costly if we try for reinforced concrete construction.

Senator BELLMON. Is the same generally true of the Navy?

Admiral MARSCHALL. Yes, sir. As a matter of fact, we have three structures that will be preengineered, metal building, but designed by typhoon standards. The rest will be reinforced concrete and steel.

EFFECT OF DELAYS ON SERVICE EFFICIENCY

Senator BELLMON. Has the delay in the replacement and restoration and repair work underway affected either the efficiency of the Air Force or the Navy on Guam?

Admiral MARSCHALL. It is hard to say.

Mr. FLIAKAS. I will say this, sir. From an operational standpoint the Air Force did exercise their B-52's shortly after the damage, and so operationally, I would say that there has been no severe impact. But certainly from the standpoint of efficient operations and the habitability and livability of the structures, I think there has been a hardship.

Admiral MARSCHALL. Whenever a natural disaster occurs, people seem to work together and work harder.

General GILBERT. I think in the Air Force certainly we have not had any effects of it yet. Our people are very understanding and, of course, many of them have been through natural disasters before and they work together to get the job done. I do believe, however, that any undue delay beyond what they consider "believable" would begin to affect certainly the morale of the people.

Mr. FLIAKAS. Yes.

Senator INOUE. Do you have any further questions?

Senator STEVENS. No.

Thank you very much.

QUESTIONS SUBMITTED BY SUBCOMMITTEE

Senator INOUE. Following are additional questions which were posed by the subcommittee. The questions, together with the answers, will be inserted in the record at this point.

[The questions and answers follow:]

QUESTION

Since it could be argued that much of the request falls under permanent authorization, what would the Department's position be if the Congressional authorizing Committees effected substantial reductions?

ANSWER

Unfortunately all of the standing emergency authorization is unfunded, and in order to utilize it we would be forced to reprogram funds from other essential projects and activities. Thus any substantial reduction in authorization would severely penalize other ongoing programs. It is precisely because of the unfunded nature of existing authorization, and the magnitude of the requirements, that we recognized our inability to reprogram sufficient funds and sought new authorization and funds in a supplementary request.

Question: Much of the request entails repair or restoration of facilities, with little, if any, upgrading. Such effort is characteristically funded from operation and maintenance appropriations. These projects are proposed for funding under Military Construction based upon the criterion that repair cost would exceed 50 percent of replacement cost, and, therefore, a proper charge to construction. Do all the projects, in fact, meet this criterion, and do you believe it to a reasonable distinction?

Answer: The Navy and Air Force regular construction projects meet this criterion, and it is believed that the 50 percent breakpoint is reasonable. With respect to Navy family housing, most of the repairs are less than 50% of the replacement with the exception of a community center which was completely destroyed.

Question: The Navy request includes almost \$4.3 million for various projects at the Ship Repair Facility. The Committee is aware that workload at this activity has been declining in recent years--so much so that the Congress deemed it necessary to establish a funding "floor" in the FY 1977 Defense Appropriations Act. What is the outlook for this activity in the future, and can you assure the Committee that facilities now proposed for construction are consistent with these future needs?

Answer: With the exception of the Ship Repair Facility, the mission of the Navy Activities on Guam is firm and the personnel loading is projected to remain at its current level with only slight variations.

In regard to the Ship Repair Facility, the Base Realignment Study announced by the Navy on March 19, 1976 included a statement that the Repair Facility was being studied for possible disestablishment and reduction to caretaker status by June 30, 1976.

Whether the Ship Repair Facility continues in operation at current level, or is reduced to caretaker status, its restoration is required for readiness in Western Pacific contingencies. Further, the Commander in Chief, Pacific Fleet has strongly recommended current level of effort of the Ship Repair Facility be maintained. Moreover, the Secretary of the Navy has made a commitment to the Congress that no action will be taken to phase down the

Ship Repair Facility pending the outcome of the Philippine Base negotiations. It should be noted that even if the Ship Repair Facility were to be reduced to caretaker status at some future date, approximately 180 civilian personnel and 100 military personnel would be required for operation of the drydock and maintenance of the facility.

Question: In a similar vein, it appears that projects in the administrative, housing and community categories are based on the assumption that the military population will remain relatively constant. Will this, in fact, be the case for the foreseeable future, or will such things as the introduction of TRIDENT submarines affect it?

Answer: The potential for adjustments to base loading and missions was reviewed during the formulation of the restoration project and only facilities supported and validated by the Navy Shore Facilities Planning System have been included in the restoration request. Future events, such as the reduction of the Ship Repair Facility to a caretaker status and the potential pull out of the Fleet Ballistic Missile Submarines tender, Proteus, as a result of the introduction of the TRIDENT submarines, were all considered and taken into account when deciding which facilities would be programmed and the proper size of these facilities.

Question: Projects for Bachelor Enlisted Quarters are termed "modernization." What changes are being incorporated?

Answer: Bachelor Enlisted Quarters included in the restoration request are presently either non-airconditioned open bay berthing spaces or non-airconditioned partially cubicalized berthing spaces. By modernization it is meant to bring these barracks in line with the current OSD criteria by providing rooms, baths and central airconditioning in addition to typhoon-proofing the basic structure.

QUESTION: You are requesting \$12,000,000 to restore 1,554 units. Does this cost include incorporation of central air conditioning? If not, would it be desirable to do so? What would be the added cost, and how would this compare to the cost if added at a later date?

ANSWER: No, central air conditioning was not included in the cost estimate.

When the Navy developed its request, improvements were not included since the work was limited to repair and replacement of facilities damaged by the typhoon. If, however, funds were made available, it would be desirable to air condition the units rather than waiting until funding could be made in future years. The Navy currently has three improvement projects for air conditioning, almost 650 units, and has planned to air condition the remaining 1,400 units, but because of the high initial investment the project would be incremented. The air conditioning work could be completed at the same time the repair work is being accomplished with very minor changes in the original plans.

It is estimated that the air conditioning and the related insulation work would require approximately \$9,500,000 for the 1,400 units that remain un-air conditioned. The only additional cost of postponing this work is the cost of inflation for each year the project is delayed.

ANDERSEN - TYPHOON DAMAGE

WING HEADQUARTERS

Question: How much of the requested \$3,170,000 relates to installation of air conditioning in this facility. Are you able to quantify the difference in overall costs between central air conditioning in a properly constructed facility and the present method of using window units in a building not designed for air conditioning?

Answer: The combined cost for insulation of the roof and the central air conditioning system is \$1,093M. Over the 25 year life expectancy of a central air conditioning system we anticipate an annual saving of about \$30,000 over the use of window units.

BACHELOR ENLISTED QUARTERS

Question: \$6.9 million is requested to restore 12 bachelor housing facilities, it appears, to original configuration. Do these not require modernization? Has any thought been given to incorporating air conditioning? What would be the additional cost?

Answer: The work identified for bachelor housing will restore the facilities to the condition that existed before the storm. The Air Force has enlisted not to bring forward any upgrading projects as a result of the storm. The bachelor quarters are air conditioned at the present time.

ELECTRICAL DISTRIBUTION SYSTEM

Question: Your request for repair of the damaged electrical distribution system assumes underground installation. Is this absolutely necessary or could concrete poles satisfy the requirement at less cost?

Answer: The Air Force position is that underground primary and secondary distribution provides the safeguards we need against storm damage in the future. The installation of secondary systems underground can be accomplished at about the same cost as an overhead system (\$9-\$10 per foot). The primary underground system is about four times more expensive than overhead lines (\$55/ft vs \$16/ft) but provides the needed protection. The requirement for underground primary at Andersen is about 4 miles.

Question: As part of the restoration of 1,454 units you plan to replace louvers and screens with concrete block and windows. Is it also planned to install air conditioning to offset the elimination of natural ventilation sources? If not, wouldn't this force an occupant to procure relatively inefficient window units at his own expense?

Answer: Initially we will have to depend upon privately owned air conditioning units which occupants have installed at their own expense. At some future time we would like to centrally air condition the units. As our request for funds to restore storm damage was being prepared, we considered asking for central air conditioning but we could not in good conscience relate this to repair of storm damage, so we did not include it.

SUBCOMMITTEE RECESS

Senator INOUE. Mr. Secretary, Admiral, General, gentlemen, I believe I speak for the committee when I say that we will do everything to expedite the request. We will advise the staff to do all the necessary paperwork so we can have an appropriate markup of the subcommittee and the full committee early next week. I don't think we can do it today. We will, hopefully, have it up on the President's desk before we adjourn sine die.

Thank you very much.

Mr. FLIAKAS. Thank you very much. That would be great.

Admiral MARSCHALL. Thank you, sir.

General GILBERT. Thank you, sir.

Senator INOUE. At this time we will recess our hearings on the bill. We will recess until Tuesday, September 21.

[Whereupon, at 11:02 a.m., Friday, September 17, the subcommittee was recessed, to reconvene at 2:40 p.m., Tuesday, September 21.]

SUPPLEMENTAL REQUESTS FOR TYPHOON DAMAGE ON GUAM AND FOR OTHER PURPOSES

TUESDAY, SEPTEMBER 21, 1976

U.S. SENATE,
SUBCOMMITTEE ON PUBLIC WORKS,
Washington, D.C.

The subcommittee met at 2:40 p.m., in room S-126, the Capitol, Hon. John C. Stennis (chairman) presiding; present, Senators Stennis, Bellmon, and Hatfield.

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

TETON DAM DISASTER

OPENING REMARKS OF SENATOR STENNIS

Senator STENNIS. Gentlemen, our subcommittee will come to order.

Yesterday, the President transmitted a request to the Congress for a supplemental appropriation for fiscal year 1977 in the amount of \$200 million for the Department of the Interior, Bureau of Reclamation, to provide compensation for damages caused by the failure of the Teton Dam in Idaho, printed as House Document 94-617.

As members know, the committee included \$200 million in the fiscal year 1977 Public Works Appropriations Act at the request of the President last June soon after the failure occurred. This is the second request as a result of the disaster in southeast Idaho.

We welcome to the committee today Mr. Donald A. Giampaoli, Assistant Commissioner of Reclamation for Resource Development and the Bureau coordinator on the Teton Dam disaster.

We are glad to have you with us, Mr. Giampaoli, and those that are with you. Will you please introduce them to us for the benefit of the record, and then proceed as you wish.

STATEMENT OF DONALD A. GIAMPAOLI, ASSISTANT COMMISSIONER
OF RECLAMATION FOR RESOURCE DEVELOPMENT

ACCOMPANIED BY:

DESS L. CHAPPELEAR, CHIEF, DIVISION OF GENERAL ENGINEERING

WARREN W. WILSON, CHIEF, DIVISION OF PROGRAM COORDINATION AND FINANCE

ROY H. BOYD, CHIEF, WATER OPERATIONS BRANCH, DIVISION OF WATER AND LAND

WILLIAM D. BETTENBERG, DEPUTY DIRECTOR, OFFICE OF BUDGET

INTRODUCTION OF ASSOCIATES

Mr. GIAMPAOLI. Mr. Chairman, I am pleased to be here.

To my far left is Mr. Bettenberg, the Deputy Director of the Office of Budget with the Department of the Interior; and Mr. Warren Wilson to my immediate left, Chief, Division of the Program Coordination and Finance.

To my right, Mr. Dess Chappellear, who is Chief of our Division of General Engineering; and to his right, Roy Boyd, Chief of the Water Operations Branch.

Senator STENNIS. Senator Hatfield, do you have any remarks?

Senator HATFIELD. No comment at this point, Mr. Chairman.

Senator STENNIS. Will you proceed. And if you have some pictures, you may show them when you wish.

Mr. GIAMPAOLI. Thank you very much.

Mr. Chairman, thank you for the opportunity to appear before the subcommittee to discuss the need for a supplemental appropriation for fiscal year 1977 for the Bureau of Reclamation to cover payments of the claims associated with the events concerning the failure of the Teton Dam in Idaho. You provided \$200 million initially, which was made immediately available on July 12, 1976. We now estimate that these funds will be exhausted in January 1977. Therefore, we ask that another \$200 million be appropriated to cover our anticipated needs through August 1977. It may be necessary to seek additional funding later if payments for claims exceed the current estimates.

In behalf of Commissioner Stamm and the entire Bureau of Reclamation, I want to express to you our deep sense of concern over the Teton tragedy. We believe it is fair to say that, over the past 75 years, the reclamation program has done more for the people of the West than any other public endeavor. Much of that region's economic vitality and its quality of life can be traced directly to our efforts in developing, conserving, and regulating the West's limited water supplies for the benefit of people.

During that period, Reclamation has earned a worldwide reputation for engineering competence and innovation in the planning, design, and construction of dams and associated water control facilities. Since its inception in 1902, the Bureau has built 240 earthfill dams and dikes, and about 50 concrete dams—all of which have performed well. The first and only failure of a reclamation dam with loss of life, destruction of property, and disruption to the thousands of victims weighs heavily upon us individually and as a professional organization.

During the discussion today, we propose to cover the history of the Teton Basin project and Teton Dam, the circumstances of the failure, the damages that occurred following the breach of Teton Dam, the extensive restoration effort, and finally the investigation activities undertaken to determine the cause of failure.

If it is agreeable to you, Mr. Chairman, following my brief remarks I will submit my entire statement for the record and we would like to show slides of the failure sequence as well as the damaged areas.

Senator STENNIS. Yes; that will be fine. You proceed now in your own way.

PROJECT DESCRIPTION

Mr. GIAMPAOLI. The Teton Basin project was authorized September 7, 1964, by Public Law 88-583, to provide supplemental irrigation for more than 110,000 acres of farmland; power from two 10,000-kilowatt hydroelectric generators; flood control; recreation; and fish and wildlife benefits and mitigation.

The lower Teton division is located near the confluence of the Henrys Fork and Teton Rivers, which are tributaries of the Snake River in Fremont, Teton, and Madison Counties in southeastern Idaho. Teton Dam and power and pumping plant are located on the Teton River North Fork in a deep canyon about 3 miles upstream of the canyon mouth. The dam was designed as a zoned earthfill structure, 305 feet in height above the foundation, with a crest length of 3,050 feet and a volume of 9.5 million cubic yards with a spillway, river outlet works, auxiliary outlet works, and powerplant and pumping plant combined.

Project construction was initiated following an award of construction contract to the joint venture of Morrison-Knudsen Co., Inc., and Peter Kiewit Sons' Co., December 13, 1971, for \$39,476,142. The specifications (DC-6910) required completion of the dam by March 10, 1977. The dam was designed by the Bureau of Reclamation and was constructed under its supervision. Construction progressed such that water storage began in October 1975. At the time of failure, the reservoir was nearly full, with the water surface at elevation 5,301.5 feet above mean sea level, just 3.5 feet below the spillway elevation of 5,305 feet.

Under this condition, the reservoir contained approximately 250,000-acre-feet of water. The reservoir capacity was to be 288,250 acre-feet.

FAILURE OF DAM

On June 5, 1976, the day of the failure, the first observation of new seepage was made between 7:30 a.m. and 8 a.m. That leak was at the downstream toe of the dam at right abutment elevation 5,045—near the valley floor. By 9 a.m., it was flowing at about 50 cubic feet per second (cfs). The water was issuing from the abutment rock and was moderately turbid. Also at about 9 a.m., a leak at approximate elevation 5,200 feet—dam crest elevation 5,332 feet—at the junction of the downstream slope of the dam embankment and the right abutment, was flowing at about 2 cubic feet per second and was issuing from the rock slightly turbid.

Although the size of the leak gave rise to concern, the dam did not appear to be in critical danger at this point in time because all leakage

that could be observed was issuing from cracks in the rock without erosion taking place. However, as a precaution, the sheriffs' offices in Madison and Fremont Counties were notified by 10:43 a.m. to alert citizens for potential flooding from Teton Dam and be prepared to evacuate the area downstream. Additional notification was given to both Madison and Fremont County sheriffs' offices between 11 and 11:30 a.m. to evacuate the areas below the dam.

Between 9:30 and 10 a.m. a wet spot at centerline station 15+00 developed about 15 feet from the right abutment in the dam embankment at approximate elevation 5,200—this was at the same elevation as the 2 cubic feet per second leak previously noticed issuing from the rock. The wet spot developed rapidly into seepage and soon started to remove material from the downstream slope of the dam, forming a crater. About 11 a.m. a whirlpool was observed in the reservoir at about centerline station 13+00 and about 15 feet from the embankment. The dam was breached at 11:57 a.m.

DAMAGES

Approximately 4 million cubic yards of the dam embankment—about 40 percent of the embankment—were lost. The powerhouse and the warehouse structures were completely submerged in the debris.

The flood waters damaged portions of Madison, Bonneville, Fremont, Jefferson, and Bingham Counties. Governor Andrus estimated the total damage at about \$1 billion.

Twelve deaths are attributed to the failure of Teton Dam as follows:

Drowning, six; heart attack, three; shooting, one; suicide, one; and an electrocution, one—during the rehabilitation process.

RESTORATION WORK

The following is a current estimate based on information on damage claims filed or expected to be filed with the Bureau of Reclamation and which total \$400 million: homes and personal property—\$85 million; farms and farm related equipment, crops, et cetera—\$191 million; private utilities—\$10 million; railroad—\$6 million; commercial and industrial property—\$72 million; death and personal injury—\$12 million; miscellaneous—\$20 million; and administrative costs—\$4 million.

Top priority was given by the Bureau to the rectification of damages to canal headings and irrigation works which deliver water to crops undamaged by floods but which would be burned out in a matter of weeks if water were not available. Contractors were mobilized immediately and work assignments made.

The restoration work as of September 14, 1976, is highlighted as follows:

Fifty-eight irrigation districts lost service to 427,000 acres.

Thirty-six irrigation district facilities were restored to serve 340,000 acres within 2 weeks.

By July 16 service was restored to 420,000 acres (98 percent of the initial area damaged).

Crop loss was limited to 7,000 acres involving seven small ditches (Sugar City and Wilford areas).

Reclamation is now working on permanent restoration of damaged works, involving 12 construction contracts, all to be completed prior to the next irrigation season (including the above 7 ditches).

Total value of restoration construction contracts is \$3 $\frac{1}{2}$ million.

Corps of Engineers has performed restoration work in urban areas.

Soil Conservation Service is now performing clearing and diking work in about 35 miles of Teton and Snake Rivers at a cost of about \$4.6 million.

PAYMENT OF CLAIMS

Three claims offices (Idaho Falls, Rexburg, and Blackfoot) were immediately set up to provide assistance to the people adversely affected by the dam failure. These offices were staffed by Reclamation, Small Business Administration, and Farmers Home Administration personnel. In addition, we have utilized the assistance of the Federal Disaster Assistance Administration in the claims-processing activities.

Congress provided \$200 million in the fiscal year 1977 Public Works for the water and power development bill, approved July 12, 1976, to cover initial claims for restitution. Regulations and detailed guidelines were prepared for use in processing damage claims.

We now anticipate that damages from the failure will exceed \$400 million. As of September 18, 1976, almost \$103 million in claims requests have been received from 2,729 claimants. The number of claims filed represents 41.5 percent of the total number of claims packets distributed to date (6,581). The larger claims which will include utility losses from railroad, telephone, gas, and electric companies have not been filed. Also, the total damages to State highways, county roads, and city streets have not been determined. Therefore, we do not have a firm estimate of the total damage claims. Most of the claims that have been filed so far are the smaller and simpler ones with the larger and more complex claims to follow.

As of September 18, 1976, the Bureau of Reclamation had paid about 1,300 claims totaling approximately \$26 million. Of the payments made, approximately \$10 million was for damages in farm areas and \$16 million was for damages in urban areas.

Based on the above estimate, we will need at least an additional \$200 million for payment of claims during the period January through August 1977.

INVESTIGATION OF DAM FAILURE

Presently, we do not know what caused the failure. We are insistent that every effort be made to find an answer so the engineering community, and the people it serves all over the world can benefit from this unhappy experience. To this end, we are cooperating fully with all investigative groups so a thorough and factual analysis of the failure results.

Subsequent to the initial investigation of the failure by Bureau of Reclamation engineers on June 6, 1976, two investigative groups were appointed. The Secretary of the Interior and the Governor of Idaho have appointed an independent panel for the purpose of evaluating the cause of the failure of Teton Dam. Also, the Department of the

Interior has appointed a Teton Dam Failure Review Group composed of representatives of several Federal agencies. It is the responsibility of these two groups to determine the cause or causes of the failure of Teton Dam. Today, both these groups are actively involved in the investigative work necessary to make such a determination.

We have been involved in hearings before the Subcommittee on Conservation, Energy, and Natural Resources of the House Committee on Government Operations. That subcommittee has been reviewing Bureau procedures and the history of the Teton Basin project to determine what changes need to be made. They have asked the General Accounting Office to assist them in that review effort.

In addition, the Secretary has directed that a review be made of the Bureau's technical procedures and organizational structure in regard to our dams program and to make a comparison to other organizations engaged in planning, designing, constructing, or operating dams.

Mr. Chairman, based on the past experience and history of the engineering profession, what happened at Teton should not have happened. But the fact remains that it did, and the Bureau is more eager and anxious than anyone to find out why.

We intend to continue to use consultants and advisory boards to confirm the adequacy of our designs as we are doing at Auburn Dam in California and Narrows Dam in Colorado; and as we have done in the past for other major structures such as Ruedi Dam in Colorado, American Falls Dam in Idaho, Glen Canyon Dam in Arizona, and Flaming Gorge Dam in Utah.

It is impossible at this time for us to pinpoint the cause of the failure of Teton Dam. Hopefully, that will be determined in the future. But in the meanwhile, we will cooperate in the review of our existing procedures, we will continue to seek additional outside counsel as needed, and we will increase our cooperative efforts with other State and Federal agencies with expertise in the field of dam safety to further guard against the possibility of such a tragedy occurring again.

That concludes my statement, and we are prepared to show slides of the failure sequence and the damaged areas. I am, of course, willing to answer any questions you may have.

PREPARED STATEMENT AND JUSTIFICATION

Senator STENNIS. Thank you. We will insert your statement in the record at the point along with the justification material supporting the supplemental request.

[The statement and justification follows:]

STATEMENT OF DONALD A. GIAMPAOLI

Mr. Chairman, thank you for the opportunity to appear before the subcommittee to discuss the need for a supplemental appropriation for fiscal year 1977 for the Bureau of Reclamation to cover payments of the claims associated with the events concerning the failure of the Teton Dam in Idaho. You provided \$200 million initially, which was made immediately available on July 12, 1976. We now estimate that these funds will be exhausted in January 1977. Therefore, we ask that another \$200 million be appropriated to cover our anticipated needs through August 1977. It may be necessary to seek additional funding later if payments for claims exceed the current estimates.

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During the discussion today, we propose to cover the history of the Teton Basin Project and Teton Dam, the circumstances of the failure, the damages that occurred following the breach of Teton Dam, the extensive

restoration effort, and finally the investigation activities undertaken to determine the cause of failure. Following this discussion, Mr. Chairman, we would like to show slides of the failure sequence and the damaged areas.

DESCRIPTION OF

THE PROJECT INCLUDING THE DAM FAILURE ON JUNE 5, 1976

Possible water resources development on the Teton River began as early as 1904. Several sites were examined on the upper Teton River and its tributaries. By 1961, the studies showed that the dam should be located just above the Snake River Plain in the North Fork Teton River. Starting in late 1961, five alternate sites were investigated in that area. Geologically, all five sites were considered feasible. The Teton damsite was selected for its more favorable economical, geographical, hydrological, and topographical considerations.

The Teton Basin Project was authorized September 7, 1964, by Public Law 88-583, to provide supplemental irrigation for more than 110,000 acres of farmland; power from two 10,000-kilowatt hydroelectric generators; flood control; recreation; and fish and wildlife benefits and mitigation.

The Lower Teton Division is located near the confluence of the Henrys Fork and Teton Rivers, which are tributaries of the Snake River in Fremont, Teton, and Madison Counties in southeastern Idaho. Teton Dam and Power and Pumping Plant are located on the Teton River North Fork in a deep canyon about 3 miles upstream of the canyon mouth. The damsite is 5 miles northeast of Newdale (population 272), about 12 miles southeast of St. Anthony (population 2,700), and 44 miles northeast of Idaho Falls (population 35,000). The dam was designed as a zoned earthfill structure, 305 feet in height above the foundation, with a crest length of 3,050 feet and a volume of 9.5 million cubic yards with a spillway, river outlet works, auxiliary outlet works, and powerplant and pumping plant (combined).

Project construction was initiated following an award of construction contract to the joint venture of Morrison-Knudsen Company, Inc., and Peter Kiewit Sons' Company, December 13, 1971, for \$39,476,142. The specifications (DC-6910) required completion of the dam by March 10, 1977. The dam was designed by the Bureau of Reclamation and was constructed under its supervision. Construction progressed such that water storage began in October 1975. At the time of failure, the reservoir was nearly full, with the water surface at elevation 5,301.5 feet above msl, just 3.5 feet below the spillway elevation of 5,305.0 feet.

Under this condition, the reservoir contained approximately 250,000 acre-feet of water. The reservoir capacity was to be 288,250 acre-feet.

On June 3, 1976, two days before the dam failed, two small springs appeared well downstream (600 and 900 feet) from the spillway stilling basin. These were of no concern because the seepage was coming from cracks in the rock and at a point far removed from the dam itself. This was not unexpected and is often experienced in similar situations, and posed no threat to the safety of the dam. On June 4, the day before the dam failed, another small spring was observed about 150 feet downstream of the toe of the dam. As of 9 p.m. on that day no seepage was observed on the dam embankment.

On June 5, 1976, the day of the failure, the first observation of new seepage was made between 7:30 a.m. and 8 a.m. That leak was at the downstream toe of the dam at right abutment elevation 5,045 (near the valley floor). By 9 a.m., it was flowing at about 50 cubic feet per second (cfs). The water issuing from the abutment rock and was moderately turbid. Also at about 9 a.m. a leak at approximate elevation 5,200 feet (dam crest elevation 5,332 feet) at the junction of the downstream slope of the dam embankment and the right abutment, was flowing at about 2 cfs and was issuing from the rock slightly turbid.

Bureau of Reclamation officials in Denver and Boise were notified at about 9:45 a.m. of the situation. Although the size of the leak gave rise

to concern, the dam did not appear to be in critical danger at this point in time because all leakage that could be observed was issuing from cracks in the rock without erosion taking place. However, as a precaution, the sheriffs' offices in Madison and Fremont counties were notified by 10:43 a.m. to alert citizens for potential flooding from Teton Dam and be prepared to evacuate the area downstream. Additional notification was given to both Madison and Fremont county sheriffs' offices between 11:00 and 11:30 a.m. to evacuate the areas below the dam.

Between 9:30 and 10 a.m. a wet spot at centerline station 15+00 developed about 15 feet from the right abutment in the dam embankment at approximate elevation 5,200 (this was at the same elevation as the 2cfs leak previously noticed issuing from the rock). The wet spot developed rapidly into seepage and soon started to remove material from the downstream slope of the dam, forming a crater. About 11 a.m. a whirlpool was observed in the reservoir at about centerline station 13+00 and about 15 feet from the embankment. The dam was breached at 11:57 a.m..

DAMAGES AND RESTORATION

About 4 million cubic yards of the dam embankment (about 40 percent of the embankment) were lost. The powerhouse and the warehouse structure were completely submerged in the debris.

The flood waters damaged portions of Madison, Bonneville, Fremont, Jefferson, and Bingham Counties. Governor Andrus estimated the total damage at about \$1 billion.

Twelve deaths are attributed to the failure of Teton Dam as follows:

Drowning -	6
Heart Attack -	3
Shooting -	1
Suicide -	1
Electrocution	1

The following is a current estimate based on information on damage claims filed or expected to be filed with the Bureau of Reclamation and which total \$400 million: homes and personal property-\$85 million, farms and farm related equipment crops, etc.,-\$191 million, private utilities-\$10 million, railroad-\$6 million, commercial and industrial property - \$72 million, death and personal injury-\$12 million, miscellaneous-\$20 million, and administrative costs-\$4 million.

Top priority was given by the Bureau to the rectification of damages to canal headings and irrigation works which deliver water to crops undamaged by floods but which would be burned out in a matter of weeks if water were not available. Contractors were mobilized immediately and work assignments made.

The restoration work as of September 14, 1976, is highlighted as follows:

- 58 irrigation districts lost service to 427,000 acres.
- 36 irrigation district facilities were restored to serve 340,000 acres within 2 weeks.
- By July 16 service was restored to 420,000 acres (98%)
- Crop loss was limited to 7,000 acres involving 7 small ditches (Sugar City and Wilford areas)
- Reclamation is now working on permanent restoration of damaged works, involving 12 construction contracts, all to be completed prior to the next irrigation season (including above 7 ditches).
- Total value of restoration construction contracts is \$3-1/2 million.
- Corps of Engineers has performed restoration work in urban areas.
- Soil Conservation Service is now performing clearing and diking work in about 35 miles of Teton and Snake Rivers at a cost of about \$4.6 million.

Three claims offices (Idaho Falls, Rexburg, and Blackfoot) were immediately setup to provide assistance to the people adversely affected by the dam failure. These offices were staffed by Reclamation, Small Business Administration, and Farmers Home Administration personnel. In addition,

we have utilized the assistance of the Federal Disaster Assistance Administration in the claims processing activities. A breakdown of the personnel is as follows:

Bureau of Reclamation	49	permanent and 19 temporary
SBA	46	permanent
FHA	13	permanent
Solicitor	3	permanent

Congress provided \$200 million in the FY 1977 Public Works for the Water and Power Development bill, approved July 12, 1976, to cover initial claims for restitution. Regulations and detailed guidelines were prepared for use in processing damage claims.

We now anticipate that damages from the failure will exceed \$400 million. As of September 18, 1976, almost \$103 million in claims requests have been received from 2,729 claimants. The number of claims filed represents 41.5 percent of the total number of claims packets distributed to date (6581). The larger claims which will include utility losses from railroad, telephone, gas, and electric companies have not been filed. Also, the total damages to State highways, county roads, and city streets have not been determined. Therefore, we do not have a firm estimate of the total damage claims. Most of the claims that have been filed so far are the smaller and simpler ones with the larger and more complex claims to follow.

As of September 18, 1976, the Bureau of Reclamation had paid about 1,300 claims totaling approximately \$26 million. Of the payments made, approximately \$10 million was for damages in farm areas and \$16 million was for damages in urban areas.

Based on the above estimate, we will need at least an additional \$200 million for payment of claims during the period January through August 1977.

INVESTIGATIONS

Presently, we do not know what caused the failure. We are insistent that every effort be made to find an answer so the engineering community, and the people it serves all over the world, can benefit from this unhappy experience. To this end, we are cooperating fully with all investigative groups so a thorough and factual analysis of the failure results.

On June 6, 1976, a team of engineers, including an engineering geologist from the Engineering and Research Center of the Bureau of Reclamation, Denver, Colorado, arrived to initiate an investigation into the cause of failure. It was obvious that the failure resulted from the large leak which developed about 15 feet from the right abutment in the dam embankment at approximate elevation 5,200, about 130 feet in elevation below the crest of the dam. The leak was under such pressure that it washed away ("piped") the embankment and ultimately resulted in the breaching of the dam. However, the team was unable to pinpoint the exact cause of the failure from a description of those who had witnessed the event and from initial observation of the breached dam.

Subsequent to the initial investigation of the failure by Bureau of Reclamation engineers on June 6, 1976, two investigative groups were appointed. The Secretary of the Interior and the Governor of Idaho have appointed an independent panel for the purpose of evaluating the cause of the failure of Teton Dam. Also, the Department of the Interior has appointed a Teton Dam Failure Review Group composed of representatives of several Federal agencies. It is the responsibility to these two groups to determine the cause or causes of the failure of Teton Dam. Today, both of these groups are actively involved in the investigative work necessary to make such a determination.

We have been involved in hearings before the Subcommittee on Conservation, Energy, and Natural Resources of the House Committee on Government Operations. That Subcommittee has been reviewing Bureau procedures and the history of the Teton Basin Project to determine what changes need to be made. They have asked the General Accounting Office to assist them in that review effort.

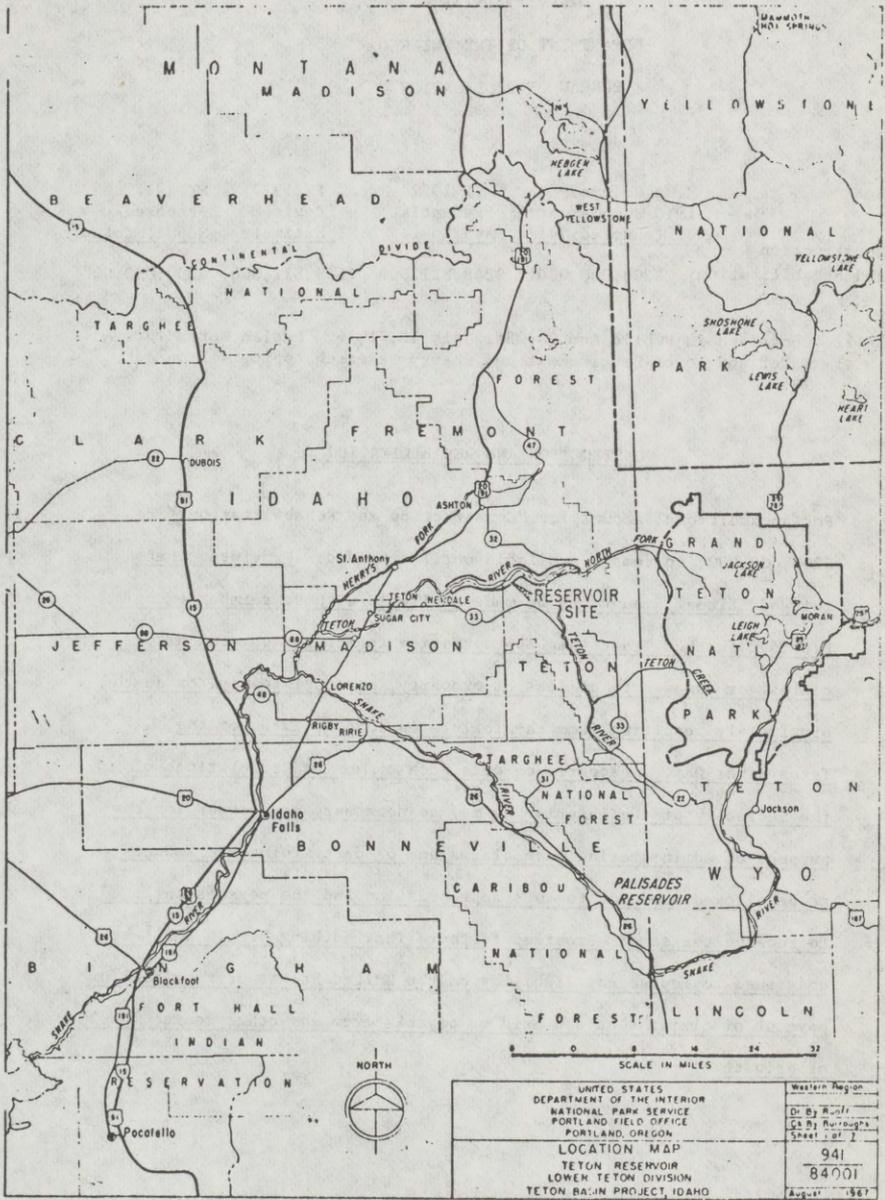
In addition, the Secretary has directed that a review be made of the Bureau's technical procedures and organizational structure in regard to our dams program and to make a comparison to other organizations engaged in planning, designing, constructing or operating dams.

Mr. Chairman, based on the past experience and history of the engineering profession, what happened at Teton should not have happened. But the fact remains that it did, and the Bureau is more eager and anxious than anyone to find out why.

We intend to continue to use consultants and advisory boards to confirm the adequacy of our designs--as we are doing at Auburn Dam in California and Narrows Dam in Colorado, and as we have done in the past for other major structures such as Ruedi Dam in Colorado, American Falls Dam in Idaho, Glen Canyon Dam in Arizona, and Flaming Gorge Dam in Utah.

It is impossible at this time for us to pinpoint the cause of the failure of Teton Dam. Hopefully, that will be possible in the future. But in the meanwhile, we will cooperate in the review of our existing procedures, we will continue to seek additional outside counsel as needed, and we will increase our cooperative efforts with other State and Federal agencies with expertise in the field of dam safety--to further guard against the possibility of such a tragedy occurring again

That concludes my statement, and we are prepared to show slides of the failure sequence and the damaged areas. I am, of course, willing to answer any questions.



UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE PORTLAND FIELD OFFICE PORTLAND, OREGON LOCATION MAP TETON RESERVOIR LOWER TETON DIVISION TETON BASIN PROJECT, IDAHO	Western Region
	Dr. By Wolf
	Ch. By Burroughs
	Sheet 1 of 2
	941 84001
	August 1961

JUSTIFICATION

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

	Memo Column: 1970 Supplemental (enacted) 1/	FY 1977 Presently Available	FY 1977 Revised Estimate	FY 1977 Proposed Supplemental
Construction and Rehabilitation	\$200,000,000	\$348,811,000	\$548,811,000	\$200,000,000

1/ Contained in Public Law 94-355, July 12, 1976, "Public Works for Water and Power Development and Energy Research Appropriation Act, 1977."

CONSTRUCTION AND REHABILITATION

For an additional amount for "Construction and Rehabilitation," \$200,000,000, to remain available until expended: Provided, That this additional amount may be made available without reimbursement: Provided further, That this appropriation is for the payment of claims for damages to or loss of property, personal injury, or death proximately resulting from the failure on June 5, 1976, of the Teton River Dam, in accordance with such rules and regulations of the Secretary of the Interior as may be necessary and proper for the purpose of administering such claims and of determining the amounts to be allowed pursuant to this appropriation and the persons entitled to receive the same: Provided further, That nothing herein shall be construed to impose any liability on the United States or to allow for payment of claims that are paid or payable from any other source, public or private.

FY 1977 SUPPLEMENTAL APPROPRIATION

Appropriation: Construction and Rehabilitation

Presently available (appropriation to date)..... \$348,811,000

Additional amount requested in this proposed supplemental for payment of claims

Teton dam failure..... 200,000,000

Total Request..... \$548,811,000

Purpose and Need for Supplemental Funds

The Construction and Rehabilitation appropriation currently provides \$200 million in the Transition Quarter for payment of claims resulting from the failure of Teton Dam, a feature of the Teton Basin Project, Lower Teton Division in Idaho. Water flowing from the structure on June 5, 1976, caused loss of life and extensive damage to property in a large area along the Teton and Snake Rivers.

Congress therefore provided \$200 million in the FY 1977 Public Works for the Water and Power Development bill passed on June 29 and signed by the President on July 12. When the amendment was proposed in the House of Representatives to add \$200 million to the Construction and Rehabilitation appropriation, there was a clear understanding that the funds were to cover initial claims for restitution and that additional claims be honored by the Government.

As of August 11, 1976, 1,522 claims have been filed totaling \$54 million. The number of claims filed represents about 25 percent of the total number of claim packets distributed to date. Most of the claims that have been filed thus far are the smaller and simpler ones with the larger and more complex claims to follow. Changes in the regulations allowing for partial payment while the larger claims are being finalized and processed will greatly increase the demand for payments. The current anticipated monthly schedule for claim payments is as follows: July \$1.7 million, August \$12.8 million, September \$25.5 million, October \$50 million, November \$50 million, December \$50 million, January \$50 million, February \$50 million, March \$50 million, April \$30 million, May \$20 million, June \$5 million, July \$3 million, and August \$2 million. Based on this schedule by early January 1977 payment of claims will exceed the funds appropriated thus far. During the period of January through August 1977, it is expected that claims will total an additional \$200 million.

The following is a current estimate based on information on damage claims filed or expected to be filed with the Bureau of Reclamation and which total \$400 million: homes and personal property-\$85 million, farms and farm related equipment crops, etc.,-\$191 million, private utilities-\$10 million, railroad-\$6 million, commercial and industrial property-\$72 million, death and personal injury-\$12 million, miscellaneous-\$20 million, and administrative costs-\$4 million. The appropriations required for payment of claims may exceed the current estimates, in which case it would be necessary to request additional appropriations to meet the need.

CONSTRUCTION AND REHABILITATION
Program and Financing (In thousands of dollars)

Identification code	Memo Column Only 1/	19 77	19 77	19 77
	Supplemental (enacted 1/)	Presently Available	Revised Estimate	Proposed Supplement
Program by Activities:				
5a. Payment of claims - Teton Dam Failure	40,000	160,000	360,000	200,000
No change in other items .	--	349,382	349,382	--
10.00 Total obligations	40,000	509,382	709,382	200,000
Financing:				
11. Receipts and reimbursements from: Federal Funds		-41	-41	--
14. Non-Federal sources		-530	-530	--
21.00 Unobligated balance available, start of period (-)	--	-160,000	-160,000	--
24.00 Unobligated balance available, end of period	160,000	--	--	--
Budget authority: (proposed supplemental appropriation)	200,000	348,811	548,811	200,000
Budget authority:				
40.00 Appropriation:				
Reclamation fund, special fund	--	214,000	214,000	--
General fund	200,000	134,811	334,811	200,000
	<u>MEMO COLUMN ONLY</u>			
1/ Contained in P.L. 94-355, July 12, 1976, "Public Works for Water and Power Development and Energy Research Appropriation Act, 1977."				

Program and Financing (In thousands of dollars)

Identification code 14-5061-1-2-301	MEMO COLUMN				
	1970	1977	1977	1977	
	Supplemental (enacted) 1/	Presently Available	Revised Estimate	Proposed Supplement	
Relation of obligations to outlays:					
71.00	Obligations incurred, net.....	40,000	508,811	708,811	200,000
72.00	Obligated balance, start of period.....	101,920	101,920	--
74.00	Obligated balance, end of period.....	-96,136	-96,136	--
90.00	Outlays.....	40,000	514,595	714,595	200,000
<u>MEMO COLUMN ONLY</u>					

1/ Contained in P.L. 94-355, July 12, 1976, "Public Works for Water and Power Development and Energy Research Appropriation Act, 1977".

OBJECT CLASSIFICATION (in thousands of dollars)

Memo Column:

Identification code 14-5061-1-2-301	197Q	1977		1977
	Supplemental (enacted)	Presently Available	Revised Estimate	Proposed Supplemental
Personnel compensation:				
11.1 Permanent positions.....	500	38,365	38,765	400
11.3 Positions other than permanent.....	-	1,079	1,079	-
11.5 Other personnel compensation.....	-	1,920	1,920	-
Total personnel compensation.....	500	41,364	41,764	400
Personnel benefits:				
12.1 Civilian.....	50	4,058	4,098	40
21.0 Travel and transportation of persons.....	300	1,701	1,901	200
22.0 Transportation of things.....	-	1,070	1,070	-
23.0 Rent, communications, and utilities.....	50	4,359	4,409	50
24.0 Printing and reproduction.....	-	565	565	-
25.0 Other services.....	1,320	6,289	7,279	990
26.0 Supplies and materials.....	80	2,879	2,899	20
31.0 Equipment.....	-	2,690	2,690	-
32.0 Lands and structures.....	-	284,447	284,447	-
41.0 Grants, subsidies, and contributions.....	-	14	14	-
42.0 Insurance claims and indemnities.....	37,700	160,000	358,300	198,300
95.0 Quarters & Subsistence Charges.....	-	-54	-54	-
99.0 Total obligations.....	40,000	509,382	709,382	200,000

PERSONNEL SUMMARY

Identification code 14-5061-1-2-301	Memo Column: 1977	19 77	1977	1977
	Supplemental (enacted)	<u>Presently Available</u>	<u>Revised Estimate</u>	<u>Proposed Supplement</u>
Total number of permanent positions.....	-	2,750	2,750	-
Full-time equivalent of other positions.....	-	100	100	-
Average paid employment.....	25	2,748	2,768	20
Average GS grade.....)	N O C H A N G E		
Average GS salary.....)			
Average salary of ungraded positions.....)			
)			

CLAIMS AND DAMAGE REQUIREMENT

Senator STENNIS. Before you start the slides, let's get straight on the requests for appropriations as a result of the Teton Dam failure.

Mr. JONES, we have already appropriated \$200 million, have we not?

Mr. JONES. Yes, Mr. Chairman, the Congress appropriated \$200 million as requested by the President in the public works appropriations bill for fiscal year 1977.

Senator STENNIS. And this is the second request for \$200 million?

Mr. JONES. Yes sir.

Senator STENNIS. A total of \$400 million. You say we now anticipate that the damages from the failure will exceed \$400 million. What about the requirement beyond this \$400 million? What is your estimate on that? You will have to give us some kind of a figure, whether you have an actual estimate yet or not.

Mr. GIAMPAOLI. We don't have a complete estimate, Mr. Chairman. We think the \$400 million is a reasonable figure for the time being. Until the larger claims come in, it is difficult to tell just what the quantity will be.

Senator STENNIS. You just say it will be over \$400 million. With all deference to you, I think we have got to have a firmer figure than that to be able to answer questions with. Even if we are satisfied with that, why the membership that haven't had a chance to hear you explain it will want to know.

Mr. GIAMPAOLI. As we proceed during the claims adjustment process, and as the larger claims come in, I think then we should be able to arrive at a firmer figure at that time. Initially following the failure one firm had estimated in the range of \$490 million. We are uncertain as to how much it will exceed that.

Senator STENNIS. Who did that estimate of \$490 million?

Mr. GIAMPAOLI. This was a firm called the General Adjustment Bureau.

Senator STENNIS. Does that include all these railroads, telephone, gas, electric, and other utilities?

Mr. GIAMPAOLI. It included a number of them. I don't have the specific information.

Senator STENNIS. That gives us some idea. Someone pitched in a damage estimate of \$1 billion.

Mr. GIAMPAOLI. I should correct myself. I gave \$490 million as the estimate of the General Adjustment Bureau, Inc. It was \$475 million.

Senator STENNIS. \$475 million. That is the only firm figure, then, that you have?

Mr. GIAMPAOLI. Well, Mr. Chairman, it was at the early stages. And so it, too, would be a preliminary estimate, because at that time we had no knowledge as to what it would be.

Senator STENNIS. What is your best figure now, you or those that are with you?

Mr. GIAMPAOLI. It could range somewhere between \$400 and \$500 million. But it really is uncertain, because the quantities are so varied.

Senator STENNIS. I don't fuss about that. But you know, we are entitled to the best figure you can give as an estimate. So you are inclined to think that \$500 million is most probably a rather firm figure for the total?

Mr. GIAMPAOLI. It should be within that amount.

Senator STENNIS. That is a firm top figure in your opinion, is that right?

Mr. GIAMPAOLI. As we receive the larger claims, it might be closer to a lesser amount, somewhere between the \$400 or \$500 million range.

Senator STENNIS. That is your best judgment on what you know at this time?

Mr. GIAMPAOLI. Yes sir.

Senator STENNIS. All right. Are you ready to show your slides?

Mr. GIAMPAOLI. Yes, we certainly are.

LOSS OF LIFE

Senator STENNIS. I am certainly proud that you didn't lose anymore lives than you did. Someone said that if there hadn't been this seepage and you hadn't given your prompt attention to that you would have lost a lot more lives. What is your response to that?

Mr. GIAMPAOLI. Yes, that is true, Mr. Chairman.

Senator STENNIS. And in fact, we kept waiting here for the news about more lives lost and all.

Mr. GIAMPAOLI. Initially there was a sizable estimate far above that. And there were many people that were not available that they couldn't trace immediately. And so the death estimate initially was quite a bit higher than it is now.

Senator STENNIS. That is all right.

DAM FOUNDATION AND STRUCTURE

Mr. GIAMPOLI. I will proceed, Mr. Chairman, with the slide presentation.

The first slide shows the plan view and a sectional view of the Teton Dam. If you will notice in the plan view, the red lines starting from the bottom to the top, that represents the grout curtain, Mr. Chairman, which is a system used to prevent seepage below the foundation of the structure. The grout curtain in the right abutment area, which is that curved area at the bottom, extends 1,000 feet beyond the abutment area. And at the top it extends 500 feet beyond the left abutment. We have in each of the abutments a triple grout curtain above elevation 5,100.

Senator STENNIS. Where is the dam now?

Mr. GIAMPAOLI. That is the downstream face of the dam. He is pointing now at the right abutment and the spillway area, which also has under its center line the auxiliary outlet works. And the pumping plant, the power and pumping plant on the left side at the toe of the structure.

With that, Mr. Chairman, I will proceed to show an aerial view of Teton Dam during construction. This was taken September 26, 1975. A ground level view from the downstream looking at the almost completed dam. This was taken November 5, 1975.

Senator STENNIS. This is different country from what I have been accustomed to seeing. What is that?

Mr. GIAMPAOLI. That is the spillway, Mr. Chairman, on the left side of the slide. And you can barely see the power and pumping plant.

Senator STENNIS. Start over that again so that Senator Bellmon can hear it.

Mr. GIAMPAOLI. On the left side of the slide is a plan view of the structure. To the right of the red line that you see would be the downstream face of the dam. And to the left would be upstream. The red line represents the grout curtain below the foundation of the dam and in the right and left abutment area. In the right abutment area, which includes that curved area from elevation 5,100, there is a triple grout curtain. And in the left abutment at the top above elevation 5,100, and extending 500 feet, there is also a triple grout curtain. The power and pumping plant would be on the left side at the toe of the structure. And the main outlet works would be located there. The auxiliary outlet works is located under the spillway with the outlet at the base of the spillway.

The other cross sections give you the general shape of the dam. It is a zoned, earthfilled structure.

Senator BELLMON. Can you define this term "triple grout curtain"?

Mr. GIAMPAOLI. Certainly, Senator. The triple grout curtain—the grout curtain upstream and the grout curtain downstream are 20 feet apart—they are 10 feet apart from the center, each grout line upstream or downstream, and there is a grout line in the center. The spacing of the upstream and downstream grout holes would be about 20 feet. And the spacing of the center grout holes would be 10 to 5 feet, depending on what closure might occur. By closure we mean when the grout holes would refuse to take further grout.

Senator BELLMON. Are those grout curtains based on solid rock?

Mr. GIAMPAOLI. It is a hard volcanic rock. And that would be the geology for this area.

Senator BELLMON. You have dug a trench into the volcanic rock and filled it with gravel?

Mr. GIAMPAOLI. In the area of the right and left abutment we dug a 70-foot key trench.

Senator BELLMON. Seventy feet deep?

Mr. GIAMPAOLI. Yes sir, 70 feet deep. And at the base of that we started the grout curtain.

In the canyon floor the grout curtain extends 260 to 310 feet below the base of the cutoff trench.

Senator STENNIS. I am not rushing you along, but we anticipate a number of votes this afternoon.

SEEPAGE PROGRESSION

Mr. GIAMPAOLI. The next slide indicates a ground level view from downstream. This was taken on November 5.

Let's back up a little.

Senator STENNIS. Tell us the dates now when this was taken, approximately, if you have them.

Mr. GIAMPAOLI. This picture was taken on November 5, 1975.

And the next slide is a view taken on the morning of June 5, 1976, at the spot where the toe and the embankment met the abutment and where the water started to seep through at the base of the dam, Mr. Chairman. You can see the seepage area to which I referred.

On the next series of slides, if you will follow the seepage in the embankment, you will see how it progressed to the top of the structure. And this was the seepage that caused the failure of the structure.

Senator BELLMON. Was that seeping through the fill?

Mr. GIAMPAOLI. Seeping through the fill.

Senator BELLMON. And this is an earth-filled dam?

Mr. GIAMPAOLI. Yes, sir.

Senator STENNIS. There is a bulldozer in this slide. Tell us about that.

Mr. GIAMPAOLI. You can see the equipment. There were two bulldozers pushing fill material and rock, whatever was available, into that hole. And as the hole progressed in size, one of the pieces of equipment started to go into it and the other was trying to pull it out. But finally they had to give up as the hole became larger.

Senator BELLMON. This seepage that was occurring and growing day by day, did it draw down the level of the water?

Mr. GIAMPAOLI. The seepage in the embankment was noticed at about midmorning. In other words, the previous day there were some seeps, but they were downstream—the previous 2 days.

Senator BELLMON. So this series of slides were taken over a matter of hours rather than several days apart?

Mr. GIAMPAOLI. That is right. In this series of slides, I am showing the time was very close. The structure failed at 11:57 a.m. on Saturday morning.

Senator BELLMON. When was the first slide taken?

Mr. GIAMPAOLI. The first slide was taken around 10 a.m.

Senator BELLMON. So this all happened in around an hour?

Mr. GIAMPAOLI. More than that, sir.

Senator BELLMON. Or 2 hours?

Mr. GIAMPAOLI. About 2 hours.

This slide will show when the structure started to fail.

Senator STENNIS. That is well on its way there.

Mr. GIAMPAOLI. In the previous slide, Mr. Chairman, at 11:57 a.m., June 5.

DISASTER WARNING

Senator BELLMON. At what time did they warn the people who lived in the area?

Mr. GIAMPAOLI. The warning went out between 10 and 10:30 a.m. There were between 2 and 2½ hours that the official warning went out prior to the failure.

Shall we proceed, Mr. Chairman?

Senator STENNIS. Yes.

Mr. GIAMPAOLI. In this slide you can also see the water going through the breached structure.

This is an aerial view of the breached dam. And that was taken between 6 and 6:30 p.m. on June 5.

Senator STENNIS. What is the future of the dam?

Mr. GIAMPAOLI. Until the cause of the failure is known, Mr. Chairman, it would be very difficult to say.

Senator STENNIS. You haven't made any headway much on that yet?

Mr. GIAMPAOLI. No, Mr. Chairman. There are two investigative bodies reviewing what the possible causes may be, and they have not come to a conclusion. It may be awhile. There is in the right abutment investigative trenching going on now. It is to check to see what type of seepage may have occurred in the right abutment area.

DAM DESIGN

Senator BELLMON. Looking at this present slide with the earthfill removed, it looks as if you simply piled stones or fill in against a more or less sheer rock canyon. You would almost expect that kind of seepage, you can't get a good bond between stone and——

Mr. GIAMPAOLI. In this area here it is filled now with part of the remnant of the embankment as it was originally. But from elevation 5,100 there is a 70-foot key trench dug into the rock. At the base of that was the triple grout curtain which extends 1,000 feet beyond this point. So that we excavated a 70-foot trench in this area.

Senator BELLMON. And this trench was filled with grout?

Mr. GIAMPAOLI. The trench was filled with zone 1 material, which is a silt material, an impervious core material. And below that, it was grouted to prevent seepage under the trench.

Senator BELLMON. What was the width of the trench?

Mr. GIAMPAOLI. The base of the trench was 30 feet, and the top was in the range of about 80 to 90 feet. And that extended all the way—1,000 feet beyond the right abutment areas, as indicated by that red line on the plan view.

DAM LOCATION

Senator STENNIS. If you were to start today to build this dam based on the knowledge you have now, would you build it in the same location?

Mr. GIAMPAOLI. Mr. Chairman, we have used every known level of engineering expertise in previous structures built by the Bureau. We have used more than one grout curtain in previous structures, and other known engineering techniques. If we would build the structure again, it would depend on the investigations made.

Senator STENNIS. At that site?

Mr. GIAMPAOLI. There is a possibility, once the cause of the failure is known—that is the key point that needs to be checked.

Senator STENNIS. Well, I wouldn't ask you to commit yourself now. But let's put it this way. Have you found anything yet that would cause you to change your location?

Mr. GIAMPAOLI. No, Mr. Chairman, we have not.

Senator STENNIS. But you wouldn't just put it back in the same place without finding something to assure you what it was?

Mr. GIAMPAOLI. Yes, Mr. Chairman, that is the key point. We must know what the cause of the failure was before any consideration can be given to rebuilding it.

CONCRETE VERSUS EARTH FILLED DAMS

Senator BELLMON. It seems to me in this narrow, deep aisle with considerable depth the use of a concrete structure might be indicated rather than an earthfilled dam. What are the comparative costs between a solid concrete dam like Hoover Dam and one of those?

Mr. GIAMPAOLI. A concrete structure is generally more costly. There are instances where a concrete structure may not be more advantageous. The advantage of an earthfilled structure, maybe the availability of the materials in the reservoir area or in the immediate area of the dam which may be used—we have indicated earlier in our statement that we have built 240 earthfill dams, and they are all functioning satisfactorily. We have never had any previous failure of this nature.

Senator STENNIS. How do you handle that dirt, bulldoze it?

Mr. GIAMPAOLI. Yes. It is a mechanized process. In the area to the left of the spillway which shows at the top left part of the photo and off the slide is the mechanized equipment that excavated the material and heavy carriers of material transport it to the dam area and place and highly compact it. You might notice that with the amount of pressure that had existed at the time of the failure, there is quite a large amount of structure remaining.

Senator STENNIS. We had better go vote now. We will return shortly.

[A brief recess was taken.]

Senator STENNIS. The hearing will come to order. Gentlemen, how much have you actually spent of the \$200 million that has already been appropriated?

Mr. GIAMPAOLI. The amount we have actually spent now is \$26,663,999.

Senator STENNIS. And I believe you said it will run to January 1977?

Mr. GIAMPAOLI. Yes, sir.

Senator BELLMON. And then this additional \$200 million will take you through August 1977?

Mr. GIAMPAOLI. Yes, Senator.

Senator STENNIS. But you are not doing any appreciable work there now, this is all just for claims, and so forth?

Mr. GIAMPAOLI. Yes, Mr. Chairman. This is only for the claims adjustments for the areas damaged downstream of the dam. The large claims have not yet been submitted, such as the highways, the utilities, the railroads.

DAMAGE TO DWELLINGS

Senator STENNIS. How many homes were affected?

Mr. GIAMPAOLI. I have those figures—800 destroyed, 694 had major damage, and 1,655 have had damage of some sort.

Senator STENNIS. 800 destroyed. It must have hit a town or large villages.

Mr. GIAMPAOLI. Yes, Mr. Chairman. We will show slides of the areas affected.

Senator STENNIS. All right, will you go on and cover the rest of it. I won't limit you to 20 minutes, but if you can do it in 20 minutes, let's try to do it.

Mr. GIAMPAOLI. This slide is looking from the upstream area downstream followed by another aerial view looking from the upstream area toward the right abutment. And this slide is looking from the downstream area toward the location of the failure. And it shows part of the power and pumping plant, the structural steel which is in the foreground of this picture. Again, that is a closeup of the structural steel.

This slide is a view from the vista point looking across the river toward the right abutment of the breached portion of the structure and again, another view from downstream looking toward the breached structure, and this view is looking downstream at the river channel downstream of the dam, Mr. Chairman.

DOWNSTREAM DAMAGE

I should add that the last picture was taken on June 6. And this slide shows the area also taken on June 6, and that is Sugar City. It was taken about 6 or 6:30 p.m. on June 5.

This is Rexburg, also taken at 6 to 6:30 p.m. on June 5.

Senator STENNIS. Is that water there?

Mr. GIAMPAOLI. That is water, Mr. Chairman. And this is a diversion dam and small powerhouse located on the Snake River which is a short distance downstream near Idaho Falls. It was taken between 11 and 11:30 a.m. on June 6.

The next slide is also at Idaho Falls taken on June 6 at 11:30 a.m. And it shows a precast concrete plant and lumber yard that was flooded by the rising water of the Snake River.

And this is the cleanup crews working on what was left of a gasline and a bridge that went across the Teton River just northwest of Sugar City, which is downstream from the breached structure.

The next series of slides, Mr. Chairman, you will see homes, automobiles that were spoiled or damaged by flooding. And these slides were taken on June 10.

This is an old hotel in Sugar City followed by this, damage west of Rexburg and in Rexburg proper.

Senator STENNIS. What is that, the force of the water?

Mr. GIAMPAOLI. Yes, Mr. Chairman.

You can see debris piled up in this slide.

This is a schoolbus, Mr. Chairman. It appears that it has been turned over and moved by the water.

Senator STENNIS. We know what that force of water means down where I live. If you put a 100-mile-per-hour wind behind it, and you have got a hurricane to meet it.

Mr. GIAMPAOLI. All of these slides were taken on June 10.

You can see the log there that Mr. Jones was talking about.

Senator STENNIS. I hope you get these people paid off now and get them back into business, whatever they were doing.

Is that a grocery store there?

Mr. GIAMPAOLI. It is a food center, Mr. Chairman. And it shows canned goods that were taken out of the store and piled against the side of the building.

That concludes our slides.

LOCAL RECOVERY EFFORTS

Senator STENNIS. Mr. Jones says that most of these people are Mormons, and they didn't wait for you to help them, they started to work to rebuild it themselves.

Mr. GIAMPAOLI. That is true, Mr. Chairman. They are very good, hard-working people. I was in Rexburg and saw what they were doing, a wonderful job.

Senator STENNIS. That is good. Do they grow potatoes out there?

Mr. GIAMPAOLI. Yes.

DISPOSITION OF TETON DAM

Senator STENNIS. It is great to have this relief. But I am concerned now as to what you are going to do about the Teton Dam, can anything be salvaged out of what is left? What are the chances of rebuilding the structure?

Mr. GIAMPAOLI. We are cooperating very closely with the review groups, and investigating what the possibilities are.

Senator STENNIS. What are your review groups?

Mr. GIAMPAOLI. There is one group which was appointed by the Secretary of the Interior and Governor Andrus, which is called the Independent Panel.

Senator STENNIS. That is all right, it is an independent panel anyway. That is the main point.

Mr. Jones, of the committee staff, visited the disaster area recently and I want him to update us at this time.

Mr. JONES. Briefly, Mr. Chairman, Mr. Lohman and I did go to the site and the area affected last month. We spent a day at the Bureau's Engineering and Research Center in Denver with briefings and reviews basically involving the dam, the site and the work done up to the time of the failure. We were then at Idaho Falls for 2 days and in the area which we overflowed. Now, when flying over you really could not tell from the air that there had been a tremendous disaster. But down on the ground, it is a totally different picture. And some of the slides shown are typical. A large part of the town of Rexburg was destroyed. Nearly everything in Sugar City was destroyed, and you can easily see the effects of the force of the water that came in there. It was just like a battering ram. The homes were completely destroyed. It was a tremendous disaster, almost like a hurricane, which you mentioned, but without the winds. I have seen hurricane damage too, and it is very similar, because of the flooding effect.

We were most impressed with the attitude and efforts of the people in the area, 95 percent of whom I understand are members of the LDS Church. And the efforts of the church are beyond measure, probably even as far as placing a monetary value on the work and relief provided by the church. I am sure it is incalculable.

Mr. Chairman, from the mouth of the canyon where the wall of water came out with such tremendous force but which dissipated rather quickly as it spread out on down the valley, the force of the water and the path the water took really left a lot of high water marks and scars all over this area immediately below the canyon mouth. One can see where the waters widened out over that area and then further down where it come back into the river. This area most affected covers about 8 to 10 miles across and 15 to 20 miles in length. And that is the area of great damage. A rich farming area, with crops of potatoes and grains.

I was astounded to learn that on 200 acres of land in this area it wasn't unusual for a potato farmer to net approximately \$40,000 to \$50,000 from 200 acres of potatoes. I thought that was pretty impressive, being more familiar with poor cotton farms of South Georgia.

Basically, though, Mr. Chairman, we found that the Bureau's effort were well received in the community. We talked with a number of local officials in the area who I believe represented the public opinion. I was surprised that the people talked as if they wanted the dam back. They are convinced that irrigation is essential to their livelihood and ability to maintain the communities. They are building their homes and farms back now.

In one community we visited, I believe it was Sugar City, I asked, "What is going to happen to this town? Will the people come back here?" It had been evacuated, there was not much left, no facilities, obviously very little of anything.

And the reply from those present was, "We are going to come back. We are going to build it back."

That kind of spirit from those deeply affected and who had lost everything, well, I couldn't get over that display of spirit when in fact they had suffered this tremendous, total disaster. They are only asking for restitution of what they had, through this claim, and I believe these people are going back to work, and to ask for the rebuilding of this dam to provide irrigation. That was a key impression I received from our trip there.

Of course, we also received a lot of information, both technical and nontechnical, photographs, charts, et cetera, and greater details of what we saw both on the ground and from the air.

Mr. Chairman, we also learned from our discussions with people there, that they were most appreciative of the past efforts of the Bureau. Not a bitter word was expressed against the Bureau in our contacts nor was any criticism leveled toward the Bureau as a result of the dam failure.

Senator STENNIS. Senator Bellmon.

Senator BELLMON. Were you up where the break occurred?

Mr. JONES. Yes, sir. We didn't get on the remaining embankment, right on the part of the dam still standing because that was obviously not allowed for safety reasons. It would be dangerous. But we could see very clearly from the observation point, the downstream face of the dam, the abutment on the side that failed and on downstream.

Senator BELLMON. And at the time you were there they were making inspections?

Mr. JONES. They were just beginning to dig into the abutment.

Senator BELLMON. Did you come back with any conclusions as to whether there was any fault in design or construction?

Mr. JONES. Senator Bellmon, every engineer and every person I talked to who was involved have their own private ideas or theories as to what happened. I have an opinion, too. And obviously people who have not been in the area have an opinion or suspicion of some sort. But the two blue ribbon panels made up of top investigators and engineers are in the process of making that assessment, to try to determine the cause. They are doing excavations into that abutment to try to determine whether there was a problem with the key trench, or

whether the water found its way around or through the grout curtain, or whether there are unconsolidated materials in there—obviously from what is known a piping effect occurred. A problem that I think should be addressed is why, in fact, the dam went so quickly—it is hard for me to understand a dam of this magnitude going out in such a short time, in a matter of 3 hours, say, from the time of discovery of the major leak. I know that is probably a concern, too, of the Bureau. But it is unusual, I believe, to see that happen that quickly.

Senator that doesn't answer what you asked, does it? I didn't think so.

Senator BELLMON. I think you more or less skirted the question. [Laughter.]

Mr. JONES. It is hard to say—it could be either design or construction or both. My personal opinion at this point is that the water found its way through a crack or hole that didn't get grouted, and/or through material that wasn't compacted and it continued to widen and get bigger. Then the dam became saturated and weakened. I don't think the water went around the grout curtain, but I think it could have occurred in that key trench and that might be related to a design problem—the trench, that is.

Mr. GIAMPAOLI. The independent panel has ruled out the water going around the grout curtain in the right abutment area. I don't believe the Interior review group has made that consideration. I understand that the compaction of the embankment is quite hard, this has been verified during excavation in the abutment area.

DAM SENSORS

Senator BELLMON. Is it standard operating procedure for the Bureau to install sensors in newly constructed fills so that alarm can be given if seepage or piping occurs?

Mr. GIAMPAOLI. Our standard operating procedure is to provide drainage systems as necessary to collect and monitor seepage and to install instrumentation for establishing the piezometric head if slope stability may be a consideration.

We also install instrumentation, as standard operating procedure, to monitor pressures in situations where a positive cutoff is not provided and excessive pressures might lead to piping.

The above instrumentation including weirs, piezometers, and water observation wells is read at periodic intervals.

TYPE OF CLAIM

Senator STENNIS. I have these additional questions which I will proceed with at this time. Elaborate on the amounts involved in a typical or average claim. In other words, how would you describe a typical claim—also whether it is a small-business man, a farmer, or a large corporation, and so forth?

Mr. GIAMPAOLI. The majority of claims received have been from homeowners for damages to their residence and personal property. The average claim consists of repair costs on a house and replacement of numerous personal property items such as furniture, clothing, ap-

pliances, recreation equipment, automobiles, and the cost of cleaning up after the flood.

The following statistical breakdown of the first 1,427 claims paid may be of interest: Payments up to \$1,000 were 228 claims; payments between \$1,000 to \$5,000 were 373 claims; payments between \$5,000 to \$10,000 were 202 claims; payments between \$10,000 to \$25,000 were 322 claims; payments between \$25,000 to \$50,000 were 179 claims; payments between \$50,000 to \$75,000 were 69 claims; payments between \$75,000 to \$100,000 were 25 claims; payments between \$100,000 to \$250,000 were 21 claims; payments between \$250,000 to \$500,000 were 5 claims; payments between \$500,000 to \$750,000 were 2 claims and there was 1 claim exceeding \$750,000.

The median claim payment falls in the \$5,000-to-\$10,000 range.

Senator STENNIS. Is there any priority in the handling and processing of claims say in favor of a small farmer as compared to a large business?

Mr. GIAMPAOLI. Each claim is handled as quickly as possible without priority except for cases of personal hardship. However, delays are sometimes encountered resulting from the complexity of the claim, difficulty in verification, unavailability of the claimant, and so forth, so that some claims are processed in less time than others.

Senator STENNIS. Have any claims been processed and settled involving highways or utilities?

Mr. GIAMPAOLI. No utility claims have been received, as yet.

REIMBURSEMENT REGULATIONS

Senator STENNIS. What is the regulation governing the claims for those who may have made expenditures from their own sources to help with the emergency and cleanup?

Mr. GIAMPAOLI. There is no allowance for reimbursement of services or expenditures of volunteers. Costs incurred in the repair and cleanup of property owned by the claimant are compensable.

Senator STENNIS. I understand that the local county governments in the area affected spent considerable sums in connection with the disaster and in the cleanup operation by providing such things as petroleum products, tires, equipment, et cetera. Will these local units of government be reimbursed for their efforts?

Mr. GIAMPAOLI. No reimbursement may be made for the cost of volunteer services and assistance. However, under the latest proposed revision to the regulations, counties may claim for damages to county owned facilities and equipment which occurred as a direct result of the flood.

Senator STENNIS. I understand that the effort of the Church of the Latter-day Saints has just been magnificent and that the disaster costs to the Government could be substantially greater if it were not for the work of the church and its members. What do you estimate would be a reasonable monetary impact of the work of the church?

Mr. GIAMPAOLI. The Church of Jesus Christ of Latter-day Saints has not attempted to make a detailed accounting of its organizational participation in the flood recovery effort. However, some statistics made available by the church indicate part of the church's voluntary

service impact at \$6,572,000. Voluntary efforts of the Latter-day Saints Church and of other churches and organizations were not confined to denominational groups.

CLAIM REQUIREMENTS

Senator STENNIS. The justification for this additional \$200 million indicates that only \$54 million in claims has been filed as of August 1976 and that approximately \$400 million will be required through August 1977. On what do you base this \$200 million supplemental estimate?

Mr. GIAMPAOLI. The need for the \$200 million supplemental request is based on the magnitude of claims received to date as related to total damages as revealed by onsite reviews and through published reports by local, county, and municipal governments and other Federal agencies. When all of these figures are consolidated and correlated, it appears the total claims requirement will be about \$400 million and could possibly exceed that amount.

Senator STENNIS. Of the \$54 million in claims, how much has been expended or actually paid?

Mr. GIAMPAOLI. That was as of August 12, 1976. At that time 190 claims had been paid for a total amount of \$2.3 million.

Senator STENNIS. Can you update the committee on the total number and amount of claims that have been submitted?

Mr. GIAMPAOLI. As of September 18, 1976, the total claims received were 2,729 in an amount of \$102.6 million. Of this total, 1,239 had received payments amounting to \$26.1 million.

Senator STENNIS. Can you give the committee some feel for what you expect the total requirement for the payment of claims to be? Do you anticipate the payments to be as high as the \$1 billion that some originally estimated?

Mr. GIAMPAOLI. Our belief now is that the total claim program will be about \$400 million. However, should this amount be inadequate, we believe any additional need would accrue late enough in fiscal year 1977 that the Congress would be in session and could be requested to provide additional funds.

REVIEW AND INVESTIGATION EFFORTS

Senator STENNIS. Update the committee on the work of the panel of engineers investigating the dam failure.

Mr. GIAMPAOLI. At the present time there are two groups investigating the dam failure. These are (1) the Independent Panel, which is a group of non-Federal engineers and a geologist appointed jointly by the Governor of Idaho and the Secretary of the Interior and (2) the Interior Review Group composed of representatives of several Federal agencies. It is the responsibility of these groups to evaluate fully the cause of the failure. The independent panel has stated they expect to complete their studies and publish their findings by the end of this year. The Interior Review Group expects to continue work into calendar year 1977.

Both of the groups have issued interim reports which basically identified the several possible causes they believed could be responsible

for the failure. The investigations underway are to support or negate each of these tentative hypotheses of causes as well as to explore others that may develop as the exploratory work continues.

RESTORATION OF IRRIGATION SYSTEMS

Senator STENNIS. What can the Bureau report as to the condition of the vital irrigation systems that were destroyed? What was the impact on the farm production?

Mr. GIAMPAOLI. A total of 58 irrigation systems serving approximately 427,000 acres of land, suffered varying degrees of damage from the Teton flood waters. Of these, seven small systems were essentially destroyed.

Within 2 weeks after the dam failure, service had been restored to 36 of the systems which serve approximately 340,000 acres or 80 percent of the total lands affected. By July 16 service had been restored to over 98 percent of the lands.

The Bureau is now in the process of making permanent repairs to the systems and, except for approximately 1,500 acres which have been so severely eroded that further use for farming is unlikely, all work should be completed by next spring.

Senator STENNIS. Senator Hatfield has some questions which will also be answered for this record.

VERIFICATION OF CLAIMS

Senator HATFIELD. Please describe the procedures being used to verify that the claims submitted are realistic.

Mr. GIAMPAOLI. Upon receipt of the claim, professional loss verifiers under contract to the Bureau of Reclamation from Small Business Administration and Farmers Home Administration are assigned to determine whether the amounts claimed are in accordance with current costs of replacement or repair of the individual items claimed. The loss verifiers contact the claimant and conduct a field investigation in each case. The claims then undergo a review by a Bureau of Reclamation review team, consisting of engineers, economists, cost analysts, and appraisers prior to submission to a Government attorney for a final determination.

Senator HATFIELD. What target has the Bureau set in terms of time between submission of the claim and the Bureau's initial response to the claimant? How close are you to coming to this target?

Mr. GIAMPAOLI. Initial contact with the claimant has been scheduled to take place within 7 to 10 days. This schedule has been met in most instances. Determinations are normally made within 3 to 4 weeks after receipt of claims. Payments have generally been made on the working day following the receipt of the signed voucher, whereby the claimant accepts the determination.

Senator STENNIS. Is there something else you want to say about the appropriation?

Mr. GIAMPAOLI. That is all I have to say, Mr. Chairman.

Senator STENNIS. Do you other gentlemen have something you wish to say?

[No response.]

Senator STENNIS. You do say that you feel certain as an official of the U.S. Government that this money is going to be required?

Mr. GIAMPAOLI. Yes, Mr. Chairman.

Senator STENNIS. Senator, do you have any discussions or comments?

Senator BELLMON. No.

Senator STENNIS. All right, the motion is that we allow this matter and report it to the full committee.

Senator BELLMON. I second the motion.

Senator STENNIS. Is there any further discussion?

Mr. GIAMPAOLI. Thank you, Mr. Chairman.

SUBCOMMITTEE RECESS

Senator STENNIS. Without objection, then, this will be reported to the full committee as our recommendation.

Thank you, gentlemen, very much.

The subcommittee will stand in recess.

[Whereupon, at 3:37 p.m., Tuesday, September 21, the subcommittee was recessed to reconvene at the call of the Chair.]

SUPPLEMENTAL REQUESTS FOR TYPHOON DAMAGE ON GUAM AND FOR OTHER PURPOSES

MONDAY, SEPTEMBER 27, 1976

**U.S. SENATE,
SUBCOMMITTEE ON THE TREASURY,
POSTAL SERVICE, AND GENERAL GOVERNMENT,
Washington, D.C.**

The subcommittee met at 10 a.m., in room 1318, Everett McKinley Dirksen Office Building, Hon. Henry L. Bellmon presiding; present, Senator Bellmon.

U.S. POSTAL SERVICE

STATEMENT OF BENJAMIN F. BAILAR, POSTMASTER GENERAL

ACCOMPANIED BY:

**WILLIAM F. BOLGER, DEPUTY POSTMASTER GENERAL
RICHARD F. GOULD, SENIOR ASSISTANT POSTMASTER
GENERAL, FINANCE GROUP
LOUIS COX, GENERAL COUNSEL**

OPENING REMARKS

Senator BELLMON. The subcommittee will come to order. This morning, we will receive testimony from Postmaster General Benjamin F. Bailar, in support of a supplemental budget estimate of \$1 billion for the U.S. Postal Service. H.R. 8603, the Postal Reorganization Amendments of 1976, authorizes two appropriations of \$500 million each. The initial appropriation is to be applied to the existing Postal Service debt as of September 30, 1976, and the second \$500 million applied to the existing debt of September 30, 1977. Postmaster General Bailar, we are pleased to welcome you and your associates this morning.

I understand you have a prepared statement. You may proceed. You may read it or summarize it.

INTRODUCTION OF ASSOCIATES

Mr. BAILAR. Thank you, Mr. Chairman. It is a brief statement. Mr. Bolger, the Deputy Postmaster General is on my right. Mr. Gould, Senior Assistant Postmaster General of Finance is on my left, and Mr. Cox, General Counsel of the Postal Service is on my far left.

STATEMENT OF POSTMASTER GENERAL BENJAMIN BAILAR

We are here to request appropriation of the supplemental amounts authorized in the recent Postal Reorganization Amendments of 1976. The amount the Service is requesting totals \$500 million for fiscal year 1976 and the transition quarter and \$505.9 million for fiscal year 1977, which includes \$5.9 million for revenue foregone.

The conference report on the legislation stated that it was understood that the President would request the appropriation immediately upon signing the bill. In conformity with that agreement, you now have his request for consideration of the supplemental amounts on a priority basis, so that it may be enacted prior to adjournment of the 94th Congress. The President's request does not include the revenue foregone in the amount of \$5.9 million at this time. If appropriation of these amounts were delayed until next year, the purpose of the recent legislation would be frustrated.

The major part of the amount requested—\$1 billion, half for the period ending this September 30 and half for fiscal year 1977—has been authorized in conjunction with a moratorium on rate and service changes during the life of a temporary commission on postal service, established to study and recommend measures to deal with continuing problems facing the postal system, 39 U.S.C. section 2401 (d), (e). The commission's report to the Congress and the President is required to be filed by March 15 of next year, at which time the moratorium on rate and service changes will end.

However, the legislation also inhibits the Service's financial flexibility by amending its temporary rate authority. Previous authority allowed the Service to implement temporary rates after 90 days from the filing if the Postal Rate Commission had not transmitted a recommended decision to the Governors.

Our ability to implement temporary rates cannot be exercised until 10 months after filing, assuming the Postal Rate Commission has not acted. This change in temporary rate authority means that even if the Postal Service files a request for further rate changes within the next few months, it is unlikely that any rate increases would occur in fiscal year 1977 unless the Postal Rate Commission acted in record time.

Thus the new law has the probable effect of postponing the next increase in postal rates for approximately 7 months beyond the date on which temporary increases otherwise could have been imposed, an action which we estimate could deprive the Postal Service of revenues in the range of \$1 billion that otherwise would have been earned. This loss of income, of course, is in addition to the loss the Postal Service will suffer from not being able to make service changes during the life of the moratorium.

The \$1 billion authorization was provided in the context of this moratorium on major changes to the status quo while the temporary study commission looks into possible changes.

Since the ban on rate increases and cost-saving measures affecting service will take away the Postal Service's ability to adjust either the income or cost side of its financial picture sufficiently to make ends meet, the supplemental appropriation is necessary to avoid, to the extent possible, accumulating operating debt on top of what has already been incurred.

PROJECTED LOSSES FOR FISCAL YEAR 1976 THROUGH FISCAL YEAR 1977

The first half of the authorization, which applies to the combined period of fiscal year 1976 plus the transition quarter, 39 U.S.C. section 2401(d)(1), is provided in the light of a projected deficit of about \$1.30 billion for the combined period.

For fiscal year 1977, without cost-saving measures that would affect service prior to March 15, 1977, and without rate increases, we currently estimate that we will lose approximately \$1.1 billion.

These expected deficit figures show how much the additional money authorized by H.R. 8603 is needed, and why it was included in the bill. However, the appropriations will not reduce the deficit figures because the appropriations are to be applied against accumulated operating indebtedness and not regarded as income for the affected periods.

Mr. Chairman, with our operational flexibility reduced as proposed by this legislation, it is essential that the Congress enact the entire \$1 billion supplemental prior to adjournment so as to effectuate the congressional intention in respect to the moratorium under the new law.

SUPPLEMENTAL APPROPRIATION REQUEST FOR REVENUE FOREGONE

The additional supplemental request of \$5.9 million for fiscal year 1977 covers the estimated revenue to be foregone because of the enactment of additional statutory reduced-rate categories for certain mailers. These include special-rate second class for college catalogs, looseleaf reporting services, and one State conservation publication for each State; special-rate second and third class and library-rate fourth class for certain mailings relating to marine agriculture; and library-rate fourth class for books mailed from a publisher or distributor to a school, college, university, or library. 39 U.S.C. subsection 3626 (b)-(d), 3683(b). Through a technical oversight, the legislation failed to perfect the authorization to fund the library-rate extension under the revenue foregone provision, 39 U.S.C. section 2401(c). However, during debate on the conference report, Chairman Henderson made the following statement:

Until the law can be changed, we on the Post Office and Civil Service Committee believe that it would be a suitable solution for the Postal Service to request the appropriation under 39 U.S.C. 2004. (122 Congressional Record H. 9699, daily edition, September 10, 1976.)

Section 2004 authorizes transitional appropriations to maintain a rate policy consistent with chapter 36 of title 39. Without the appropriation, the cost of the new subsidy for mailings of publishing houses would be placed on other mailers, in violation of the basic ratemaking assumptions of the statute.

Mr. Chairman, we request that the entire supplemental of \$1,005,900,000 be favorably reported to the House as soon as possible.

We would be pleased to respond to your questions.

TIMING FOR AVAILABILITY OF APPROPRIATION REQUEST

Senator BELLMON. Thank you, General. The request of the President in your statement indicates the need for the entire \$1 billion at this

time. Please explain why the initial \$500 million cannot be made available to apply against the debt existing on September 30, 1976, and the remaining \$500 million made available in fiscal 1977.

We have available some flexibility in the transition quarter. I believe Congress would like to go ahead and appropriate the \$500 million to be used during the transition quarter and later appropriate the second \$500 million to be used during fiscal 1977.

Mr. BAILAR. The first and most simple answer is we need the money now. The first \$500 million authorization applies against our accumulated operating indebtedness as of September 30, 1976. The second \$500 million authorization applies against our accumulated operating indebtedness as of September 30, 1977. Our accumulated operating indebtedness so far already exceeds \$1 billion, far exceeds it, and indeed will still exceed that amount as of the dates indicated after the application of the \$1 billion that we are requesting today.

In this context, it makes no sense to me to delay the appropriation of the supplemental funds. Secondly, the service and rate moratoriums which are in H.R. 8603, as well as the restriction on our temporary rate authority contained in that bill, will inhibit our ability to avoid accumulating additional operating losses.

The temporary study commission will make its report on March 15 of next year. I think it makes little sense to go through the supplemental appropriation process twice. The need and the legislation are present. I think in the interest of efficiency, it could well be handled in one step.

SERVICE AND RATE MORATORIUM

Senator BELLMON. General, you made reference to this service and rate moratorium in your statement and also just now in your response as if this is something Congress is doing to the Postal Service. We thought we were preventing you from having to do something. As I recall in our oversight hearings, you pointed out when you raise rates, you begin to lose volume of business.

The rationale we have had behind setting up this temporary commission was to find out whether or not it is viable to expect the Postal Service to go on a cost of service basis for all its various classes of mail. However, we are going to have to provide for some adequate subsidy so you will be able to continue operating and not raise rates to the point that you have driven away all your customers.

Are you telling us now that if the Congress had not acted, that the Postal Service could have solved its own problems by raising its rates?

Mr. BAILAR. If Congress had not acted, we would have had to solve our own problems, by either a rate increase or some service cuts.

Senator BELLMON. Does this simply drive away your volume of customers?

Mr. BAILAR. It would have solved the problem in the short-term. I think it would have been more serious in the long term. I don't think it is a long-term solution. I think it would eventually cause some of our volume to go away, particularly some of our second and third class volume.

Senator BELLMON. Is a reduction in service a solution?

Mr. BAILAR. I think there are some ways in which we can accomplish cost reductions without reducing service, Mr. Chairman. These are things that have been discussed. They are rather controversial. But the fact is that even though, in my judgment, we could have taken those steps, this law prevents us from doing so for the period the study commission is going to look at it. So, the opportunities to reduce our costs which we would have done if we had been required to do so are not available to us.

Senator BELLMON. But the rationale of Congress, at least on the Senate side, was if we had a temporary commission looking into the operation of the Postal Service and if during that time, the postal commission was reducing the level of service, then any conclusions the commission might reach would not necessarily be valid because we would be dealing with a constantly changing level of service.

It seemed to us we had to sort of freeze the present pattern until the commission finished its work.

Mr. BAILAR. I understand the reasoning behind it very well. We certainly have every intention of complying with it. It is just that there were some opportunities for cost reduction that we don't now have.

Senator BELLMON. It seems to be the thrust of your statement that you are being critical of Congress on something we felt we were trying to be helpful on.

Mr. BAILAR. I didn't mean it to have that tone.

APPLICATION OF APPROPRIATIONS

Senator BELLMON. If we provide the entire \$1 billion at this time, would this provide the Postal Service with \$500 million to invest before it is required to be obligated against the existing debt as of September 30, 1977?

Mr. BAILAR. As I understand the legislation, it authorizes the \$500 million to be used against operating indebtedness as of September 30, 1976, and another \$500 million as of September 30, 1977. We currently have an accumulated operating indebtedness of about \$1.5 billion.

As of the end of this week when we make some new borrowings on September 30, our operating indebtedness will be \$1.625 billion. Even the \$500 million which is anticipated for fiscal 1976 in the transitional quarter will still leave us with accumulated operating indebtedness in excess of \$1 billion.

I guess the point I am trying to make and not very succinctly is we are clearly going to have a rather large accumulated operating indebtedness as of September 30, 1977. We can say that categorically right now. That is why the money would be helpful as of today. The entire appropriation, Mr. Chairman, would be applied whenever we get it to reduce operating indebtedness immediately.

FAILURE TO APPROPRIATE ENTIRE REQUEST

Senator BELLMON. In the event Congress appropriates only the \$500 million which is required as of September 30, 1976, what would be the impact on the Postal Service, would this damage severely your operation?

Mr. BAILAR. I think, Mr. Chairman, we would hopefully, on the basis of legislative history, be able to come to the conclusion that the other \$500 million would be considered during fiscal 1977.

Accordingly, the only impact, if it can be called that, is that we would not be able to make the reduction in our operating indebtedness now, as we wanted to. A year from now, we would have that much operating indebtedness over our heads and we would have the interest on it in the meantime.

Senator BELLMON. Even if you get the entire \$1 billion, you still are not going to wipe out all your debts.

Mr. BAILAR. No, sir. We have this accumulated operating indebtedness of \$1.6 billion. We have some additional debt that has been used for capital purposes that is not germane to this discussion.

FACTORS CONTRIBUTING TO POSTAL SERVICE OPERATING INDEBTEDNESS

Senator BELLMON. You have that large debt because the Postal Rate Commission was tardy in giving the rate increases that were requested. I think that was something like \$800 million.

Mr. BAILAR. Actually, Mr. Chairman, it is closer to \$1.2 billion. In my judgment, that is probably the largest contributing factor—not the only one—to our financial situation. The second rate case took almost 2 years. With it taking that long, we were prevented from moving on to a higher level of rates during the period of double-digit inflation that we had in the early seventies. As a result, we got behind the eight ball. That is why we have accumulated this operating indebtedness.

Senator BELLMON. General, we have a number of other questions. We want to go ahead and try to move this bill as promptly as we can, hopefully today. Unless you have any comments, I would like to submit these questions to you in writing and get your responses in writing. I think I can assure you that Congress will act promptly and favorably on the request.

Mr. BAILAR. We will be happy to provide the answers in writing. I certainly appreciate this expeditious hearing on the part of the Congress.

[The questions and answers follows:]

SERVICE ADVISES AGAINST SPLITTING APPROPRIATION

QUESTION: The request of the President and your statement indicate the need of the entire \$1 billion at this time. Please explain why the initial \$500 million could not be made available to apply against the debt existing on September 30, 1976, and the remaining \$500 million be made available during fiscal year 1977.

ANSWER: From a practical point of view, the amounts authorized can be made available in two separate steps. However, the intent of the concurring parties was to make the entire \$1 billion available immediately in one step. The splitting of the appropriations raises the interest expense incurred by the Postal Service on its operating indebtedness since the Service had intended to retire \$1 billion immediately. Delaying receipt of the second \$500 million will prevent the Service from reducing its interest expense by about \$40 to \$45 million.

QUESTION: The second \$500 million is to be applied against the debt existing as of September 30, 1977; is this not correct?

ANSWER: As we understand it, the entire appropriation is intended to have the effect of holding down the total amount of indebtedness incurred by the Postal Service as of September 30, 1977. The most consistent way to do so in the context of the legislative package of which the authorization is a part, is to apply the funds while revenue and cost levels are substantially frozen because of the loss of revenues resulting from the moratorium on rate increases and service reductions. Our limited sources of financing will make this input especially needed to cover the estimated additional debt necessary to continue operations.

QUESTION: In essence, wouldn't providing the entire \$1 billion at this time merely provide the Postal Service with \$500 million to invest for 1 year before it would be required to be obligated against the existing debt as of September 30, 1977?

ANSWER: No. It has been the intent of the Postal Service to apply the entire appropriation of \$1 billion to existing debt immediately upon receipt so that interest costs which are borne by the rate payer could be reduced.

INTENT OF CONGRESS

QUESTION: Do you really believe it was the intention of the Congress to provide the entire \$1 billion at this time?

ANSWER: It was the intention of the conferees, as communicated to us. Our understanding since the compromise agreement was reached on the bill last spring was that the entire \$1 billion—a reduction from amounts previously discussed—would be available immediately. Our position was that without such an intent, we would be forced to regard the bill, on balance, as providing more obstacles than help for the Postal Service. Accordingly, we were disturbed to see in the press, and later in portions of the Senate debates, statements that the first \$500 million was intended for fiscal year 1977 (i.e., to be appropriated immediately), and the second \$500 million for fiscal year 1978 (i.e., to be postponed until the regular appropriation for fiscal year 1978). We expressed our point of view to the conferees, who adopted, at our request, amendments to the bill to make it clear that the second half of the authorization, not the first, was for fiscal year 1977; and that the first was for the combined period of fiscal year 1976 and the transition quarter. Since the regular appropriation for all three affected periods had already been enacted, it was intended that the full amount authorized be forthcoming immediately. That understanding was cleared with the Office of Management and Budget, as reflected in the conference report (H.R. Rept. 94-1444, 94th Cong., 2d sess. 13 (1976)), and the President forwarded his request for the entire amount immediately upon signing the bill, as promised. In sum, we have regarded action on the entire \$1 billion by the 94th Congress as an integral part of the compromise arrangement on the bill and have been given to understand that the conferees and the administration have intended that result in approving the authorizing legislation.

IMPACT ON POSTAL SERVICE OF PARTIAL APPROPRIATION

QUESTION: In the event the Congress appropriates only the \$500 million which is required as of September 30, 1976, what would be the impact on the Postal Service?

ANSWER: The loss of revenues for the period covered by the moratorium could require the Postal Service to provide the necessary funds to cover operating costs by using its borrowing authority—not a prudent initiative. The Postal Service is already seriously weakened by its existing financial condition. When the legislation just enacted assures the incurrence of additional operating deficits that might have been avoided by timely rate changes, failure to make the newly authorized amounts for fiscal year 1977 available at the same time that regular appropriations for fiscal year 1977 become available could result in a further weakened position for the Postal Service during the uncertain period immediately ahead.

QUESTION: What is the deficit of the Postal Service at the present time?

ANSWER: The accumulated operating deficits of the Postal Service through fiscal year 1976 total about \$2.8 billion.

QUESTION: What do you project it will be on September 30, 1977?

ANSWER: Projected operating losses for the transition quarter and fiscal year 1977 will increase the accumulated operating deficits to about \$4.1 billion.

QUESTION: Does your estimate of the projected deficit as of September 30, 1977, include the requested appropriation of \$1 billion?

ANSWER: The recently signed legislation implies that the appropriated funds would be applied against the accumulated operating indebtedness as of September 30, 1976, and September 30, 1977, respectively. While the receipt of the funds will have no impact upon our projected operating deficit as of September 30, 1977, (since from an accounting point of view, the \$1 billion will be treated as an additional infusion of equity capital and not as income), we have included the funds in our estimates of cash flow.

INTERIM RELIEF MEASURE

QUESTION: Reduced to simple terms, we are really being asked to appropriate \$1 billion to maintain the current postal rates and service during the period while the temporary study commission studies the postal problems and reports to the President and Congress on March 15, 1977; is this correct?

ANSWER: This statement, insofar as it refers to why the Postal Service has requested the appropriation, may put the cart before the horse, in our view. The \$1 billion authorization and the moratorium were enacted in tandem with a view toward maintaining present rate and service levels, despite an accumulation of about \$4 billion in operating losses by the Postal Service, while long-term solutions through adjustments in the public service contribution or other changes can be considered. However, the moratorium was added late in the history of this legislation, which has included an additional authorization for the Postal Service since it was first proposed on June 20, 1974, as H.R. 15511, 93d Congress. The moratorium first was added to the bill nearly 2 years later, in Senate Post Office and Civil Service Committee Print No. 3, S. 2844, on May 26, 1976. It is our understanding that this was added pursuant to an idea advanced in testimony on behalf of the National Association of Letter Carriers on April 19, 1976, on the argument that additional appropriations to the Postal Service during the life of the Study Commission ought to be accompanied by statutory protection against major changes in the status quo while the Commission undertook to decide what kind of changes are needed. (See hearings on S. 2844 before the Committee on Post Office and Civil Service, U.S. Senate, part 4, at 6, 12 (1976)).

It has been our position, since the Postmaster General first requested an additional authorization 1 year ago, that an additional amount of about \$920 million per year is needed as an interim measure, to compensate for the toll

that unanticipated inflation and ratemaking delays have taken already, until permanent adjustments can be studied and accomplished. We have felt that this funding is necessary to rehabilitate the Postal Service's weakened financial position and to head off service cutbacks and rate increases that are steeper than would otherwise be justified. Of course, the enactment of an absolute moratorium on any service or rate changes at all, and the authorization of only half the interim annual funding increase we requested, serve to make the appropriation, now, of the entire amount authorized, even more necessary.

FINANCING OF EXISTING DEBT

QUESTION: How has your current existing debt been financed?

ANSWER: The current existing debt of the Postal Service has been financed from two sources: \$250 million was obtained from the sale of bonds to the public, and the balance of \$2,748 million was financed in the form of notes payable to the Federal Financing Bank.

QUESTION: How much of your existing debt will be coming due within the next 12 months?

ANSWER: Including debt incurred on September 30, 1976, \$432 million is due and payable before September 30, 1977.

CURRENT DEBT SCHEDULE

QUESTION: What interest rate are you paying on your borrowed funds?

ANSWER: The existing Postal Service debt was incurred at various times and at different interest rates, ranging from a low of 6.875 percent to a high of 8.20 percent. With the exception of our first bond issue, all financing has been arranged with the Federal Financing Bank (FFB).

Our current debt schedule is:

<u>Date of issue</u> <u>Calendar year:</u>	<u>Type</u>	<u>Purpose</u>	<u>Percentage</u> <u>Rate</u>
1972-----	Bonds	Capital	6.875
1975-----	FFB notes	"	8.2
1976-----	"	"	8.075
1975-----	"	Operating	7.80
1975-----	"	"	7.65
1976-----	"	"	7.78
1976-----	"	"	6.85

COLLEGE CATALOGUES PROVISION

QUESTION: Please explain a bit more why the authorizing legislation failed to include authority for the library-rate extension of college catalogues and the other mentioned items under the revenue foregone provision.

ANSWER: The legislation does provide authority for revenue foregone for the college catalogues (second-class) provision, new 39 USC 3626(b), and also for new subsections (c) and (d) of section 3626, since the revenue foregone authorization, 39 USC 2401 (c), authorizes appropriation of "the difference between the revenues the Postal Service would have received if sections 3217, 3403-3405, and 3626 of this title had not been enacted and the estimated revenues to be received on mail carried under such sections of the act." (No funds were actually requested for college catalogues since all but a very few have been entered as second class up to the date of enactment and funding had already been taken into account in the regular fiscal year 1977 request.) However, the legislation failed to perfect the authorization, under section 2401(c), of revenue foregone because of new section 3683(b), which extends eligibility for library-rate fourth class to books (not catalogues) mailed from a publisher or distributor to a school, college, uni-

versity or library, since section 2401 (c) does not mention section 3683. This occurred due to a technical oversight in conference, when the conferees accepted the House provision extending the library rate, which the Senate bill did not include and which the Postal Service had opposed. However, as quoted in our prepared statement, the conferees recognized the oversight after their report was filed and specifically indicated in House debate on the conference report that they considered the necessary appropriation to be authorized on an interim basis under 39 USC 2004, to insure a rate policy consistent with the principles of title 39, until a perfecting amendment making the necessary link to section 2401(c) can be enacted.

QUESTION: Why is it that your statement indicates a requirement for revenue foregone whereas the Presidential request does not?

ANSWER: While we do not know why the President has not forwarded our request for \$5.9 million for revenue foregone for fiscal year 1977 because of the enactment of Public Law 94-421, we might speculate, from conversations with his advisers, that he intends to wait until the budget for fiscal year 1978 is transmitted early next year. Certainly the Postal Service, and mailers in general, should not be left holding the tab for these newly authorized subsidized postage benefits.

TEMPORARY STUDY COMMISSION FUNDING

QUESTION: Why is it that no funds were requested for support of the temporary study commission?

ANSWER: Without hearing from the Commission, the Postal Service has no basis for estimating how much to request for the Commission's activities. Once the Commission begins operation, we will ask to receive a budget estimate and will forward a request to the President at an appropriate time. Under section 7(h) of Public Law 94-421, expenses of the Commission may be paid from the Postal Service Fund in the meantime. In our request to the Office of Management and Budget (Sept. 10, 1976) for supplemental appropriations pursuant to this legislation, we advised OMB that as soon as the Commission had been organized and budget estimates prepared, the Service would forward a request for the necessary amount.

POSTAL SERVICE CRITICIZED

QUESTION: There have been a number of stories in the media that the Postal Service is on the verge of collapse. Could you provide me with your view of these stories and how you assess the current state of the Postal Service.

ANSWER: As the Postmaster General told the Postal Forum earlier this month, if one only had these stories to go by, "he would be amazed to learn that every day we successfully deliver some 300 million pieces of mail." Certainly everyone knows about postal problems. They are real. However, in comparison to the state of the postal system in 1969-70 when postal reform was being considered, important progress has been made. Postal reform has not accomplished a miracle, but it should not have been expected to do so. It has meant planning, building, mechanizing, motorizing, modernizing, and introducing improved work methods and industrial engineering techniques on an unprecedented scale. In short, it has finally moved the postal system, which in 1970 belonged essentially to the 19th century, into the modern era.

Most of the criticism of the Postal Service has not been for failing to meet its legal mandate but for pursuing it closely—for trying to trim costs and achieve the efficiencies intended. Balancing and reconciling both our service and our financial responsibilities requires the hard decisions that postal reform is all about—even when these decisions may not be popular. We still have a long way to go, but we have come far and will not relent in our attempts to complete the job.

QUESTION: Do you believe the President may have a change of heart regarding the Postal Service as a result of the reorganization amendments and include a request in his fiscal year 1978 budget for the extended phasing authorized for certain second-, third- and fourth-class mailers by Public Law 93-328?

ANSWER: As yet we have no information upon which to form a belief with respect to the President's plans whether to include in the fiscal year 1978 budget a request to fund the extended phasing authorized by Public Law 93-328.

COST REDUCTION ACTIONS

QUESTION: Are there any cost reductions actions that you are currently pursuing which do not involve reductions in service to the public?

ANSWER: We are currently pursuing programs which we estimate would have a cost reduction impact of \$161,420,000 in fiscal year 1977. These programs will not involve reductions in service to the public, but will, in the majority of programs, result in increased productivity and improved operating efficiencies.

COST REDUCTIONS—FISCAL YEAR 1977

(In thousands of dollars)

Bulk mail system-----	18,380
Mail processing improvements-----	109,400
Delivery service programs-----	27,605
Retail analysis programs-----	5,295
Miscellaneous programs-----	740
Total -----	161,420

REASONS FOR PRESENT FINANCIAL CONDITION

QUESTION: Postmaster General, what do you believe have been the most critical elements that have led to the financial situation that currently exists in the Postal Service today?

ANSWER: In reviewing our financial performance over the first 5 years of postal reform, there seems to be three major elements that have contributed heavily to our currently poor financial condition. They are: (1) lengthy delays in the processing of rate requests before the Postal Rate Commission; (2) the impact of inflation on operating costs; and (3) the recent rather deep recession.

The most recent rate request was completed in less than 10 months, a substantial improvement over the 17 months and near 24 months required for completion of the two previous cases. If our second rate request had been completed within a reasonable time, the Service could have implemented new rates which would have caused fiscal year 1976 to operate at a breakeven rather than incur an operating loss of about \$1.2 billion.

The impact of inflation upon the Service's operating costs has been cited on numerous occasions. Our collective-bargaining agreement contains a cost-of-living allowance clause which is tied to the Consumer Price Index (CPI). Since fiscal year 1973, inflation has generated a substantial upward increase in the CPI, resulting in cost-of-living allowances which amount to an average increase in salaries/employee of \$1,830. Inflation has also contributed to the increase in the costs of transportation and delivery services, and heating, fuel, and utilities.

Finally, mail volume is influenced by the state of the economy. Simultaneously with the rapid increase in our operating costs, considerably influenced by inflation, and our inability to raise our rates because of overly long rate proceedings, the country experienced its most severe recession since the 1930's. While we are unable to precisely define the impact of the recession on mail volume, nevertheless, mail volume did slow its rate of growth and even actually declined in fiscal year 1975.

CONCLUSION OF HEARINGS

Senator BELLMON. That concludes the hearing. The subcommittee will recess and reconvene at the call of the Chair.

Thank you.

[Whereupon, at 10:15 a.m., Monday, September 27, the hearings were concluded and the subcommittee was recessed, to reconvene at the call of the Chair.]

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