USAID/EL SALVADOR HURRICANE MITCH RECONSTRUCTION COMPLETION REPORT

Special Objective: "Reduced Vulnerability of the Rural Poor to Natural Disasters in Targeted Areas (SpO 519-007)

Approval Date: June 17, 1999

1. SUMMARY:

USAID/El Salvador's Hurricane Mitch Activity closed well ahead of schedule at the end of FY 2001, having achieved a number of impressive results in the areas of economic reactivation, social and economic infrastructure (roads, electricity lines, wells, potable water systems, latrines, homes, schools, desks, solar panels), environmental management, and disaster preparedness. This document discusses (a) the impact that Hurricane Mitch had on El Salvador, (b) the disaster response on the part of the United States Government (USG) during both the emergency relief and reconstruction phases, (c) the development results that were achieved, and (d) lessons learned under USAID's successful emergency response and reconstruction program. The program was funded at $50.2 million, receiving $44.7 million in USG help during the reconstruction phase -- the most significant element being $24.8 million in USAID/El Salvador bilateral Central America and the Caribbean Emergency Disaster Recovery Fund (CACEDRF) monies -- and $5.5 million in the emergency phase (an amplified budget table appears as an attachment to this document).

2. HURRICANE MITCH'S IMPACT:

While El Salvador was not as hard hit as some of its Central American neighbors, the country, nonetheless, incurred considerable damage from Hurricane Mitch. On November 1, 1998, days of constant rains culminated in the emergency release of a wall of water from the country's major hydroelectric dam, producing major mudslides on denuded hillsides and severe flooding in the coastal regions of the Rio Lempa and Rio Grande de San Miguel. 374 Salvadorans perished; another 55,800 were displaced; and economic damage exceeded $600 million. In terms of productive sector activity, 65,200 hectares were badly flooded; 18% of the 1998/99 basic grain harvest was lost; and major losses of sugarcane, totaling 9% of estimated 1998/99 production, were sustained. As for economic infrastructure, 60% of the country's 1,998 kilometers of paved roads suffered some surface damage with severe damage in those regions that were most affected, and 2,653 kilometers of rural roads were identified as needing major rehabilitation. And in social infrastructure, 283 schools (6% of the total and serving 92,488 students), were damaged or destroyed by flooding, landslides, or their use as refugee centers with repair cost estimated on the order of $5 million; replacement costs for school furniture and educational materials were placed at another $4.2 million; and 22 small health units and related equipment were damaged or destroyed with losses in the neighborhood of $2 million.

3. EMERGENCY ASSISTANCE PHASE:

The USG, through USAID and the United States Department of Defense (DOD), responded in the relief phase, providing $5.5 million. DOD assisted the country with engineering, water provision, the establishment of a clinic, and medical readiness exercises, valued at $420,562. For its part, USAID furnished $5.1 million. $1.1 million for humanitarian assistance focused on water and sanitation. Within this allocation USAID signed, during the emergency phase, a $1 million cooperative agreement with the U.S. PVO CARE to carry out a six-month emergency water rehabilitation activity to reconstruct/rebuild 4,626 wells and 4,750 latrines and repair water systems for 10,600 beneficiaries and 514 latrines in Mitch-affected zones. USAID also re-programmed $3.9 million from core programs to jump start reconstruction prior to the passage of the Hurricane Mitch supplemental (CACEDRF).

4. GOVERNMENT OF EL SALVADOR (GOES) EMERGENCY RESPONSE:

The GOES also provided assistance in the emergency phase of the disaster. It opened 147 emergency shelters to accommodate the displaced, and it took immediate action to repair the primary road network. Within 120 days after the Hurricane struck, it had repaired 68% of the damaged paved roads and replaced two of the three Bailey-type bridges across the Lempa River. Also, the rapid and thorough response on the part of the Ministry of Health (MOH) was crucial in responding rapidly and thoroughly to minimize the outbreak and severity of diseases. Health promoters from less affected regions together with 30 nurse assistants funded by USAID helped staff health clinics around the clock to attend to the needs of flood victims. The MOH's efforts were complemented by the work of the Academy for Educational Development (AED), a USAID contractor, which launched an extensive campaign in the affected areas to educate people on the means to treat contaminated water.

5. RECONSTRUCTION/RECOVERY PHASE:

At the outset of the reconstruction phase, USAID/El Salvador prepared a strategy document "Reduced Vulnerability of the Rural Poor to Natural Disasters in Targeted Areas" that was submitted to USAID/W in March 1999 and subsequently approved. The strategy provided for interventions in three main programmatic areas, consisting of the stimulation of economic activity (economic reactivation), increased access to basic community services (investments in social infrastructure such as water systems, wells, latrines, and schools), and the mitigation of the environmental impact of future natural disasters which focused heavily on environmental management and disaster preparedness. The emphasis of the Mission's efforts were those 10 municipalities where the damage was most severe, situated in the Lempa-Grande floodplain. Of the 153,000 Salvadorans living in the rural areas of these 10 municipalities, 147 communities comprising 37,000 people were identified as the most affected, and these individuals became the program's target population. To ensure that we were addressing the real earthquake-related needs of the Salvadoran people, program activities worked at the community level with strong community participation. To guarantee that its

interventions would provide for the greatest value-added, the Mission carried out a number of Mitch damage assessments.

6. RECONSTRUCTION FUNDING:

In all, USAID provided to El Salvador $25.8 million during the reconstruction phase, consisting of $24.8 million in bilateral CACEDRF monies, $500,000 in CSD funds, and $500,000 in OFDA monies. This was supplemented by $6.9 million in CACEDRF funding for other USG agencies for activities focused on El Salvador, $5 million in DOD New Horizons programming, and $5 million in United States Department of Agriculture Section 416 funding. Under the USDA program, 40,000 tons of wheat and corn generated local currency that was used to reconstruct houses, rural roads, and bridges in Mitch-affected areas. Finally, the USAID/G-CAP allocations to regional programs emphasized the transnational management and creation of a forecast system for the Rio Lempa watershed.

Counterpart and Cost Sharing:

ACTIVITY	COUNTERPART/COST SHARING REQUIREMENT	ACHIEVEMENT
MIRA/CHF (CC)	$1,648,567.00	$3,163,625.00
MAS/CARE (CC)	$ 554,045.00	$ 911,809.00
MESA/MOP	$ 571,428.00	$ 666,897.96
MESA/SETEFE	$ 255,000.00	$ 305,339.00

7. ACCOMPLISHMENTS.

Significant work was carried out by USAID in four areas including economic reactivation, economic and social infrastructure, environmental management, and disaster mitigation.

ECONOMIC REACTIVATION: USAID helped El Salvador's economy to recover in the most-affected Mitch areas. Over 5,500 Mitch-affected farmers received agricultural inputs and technical assistance (TA) in soil preparation and training in planting, management, harvesting, and marketing strictly via organic methods, planting 2,297 hectares with high value crops. This work was carried out by one of its partners -- the Cooperative Housing Foundation (CHF) which sub-contracted to the Cooperative League for the United States (CLUSA).

COMMUNITY INFRASTRUCTURE: USAID restored and expanded access to basic community services. 51 small infrastructure projects were carried out, including shelters in schools, dispensaries, bridges, and small rural roads, benefiting 79,250 persons in 182 communities; local communities participated most enthusiastically, providing valuable cost-sharing. 500 homes were built, reaching 3,000 persons in 33 communities and using design standards aimed to mitigate the effects of disasters from flooding and other natural disasters. 79 schools were repaired or rebuilt and another four were re-equipped, helping

212 communities and nearly 19,000 students in those communities; beneficiary communities donated construction materials, equipment, and labor. 4,500 replacement desks were delivered to 59 schools. 420 solar panels were installed in 198 community facilities. In the area of potable water, sanitary seals and hand pumps were provided for 1,146 wells providing water services to over 9,500 individuals; 5,342 latrines were built; and 13 potable water systems were put in place serving over 23,000 residents, in addition to providing for community health education. Local water committees also were established and community members trained to provide for sustainability. In addition, a total of 136 kilometers of rural roads were repaired benefiting more than 176,000 Salvadorans, and 205 kilometers of electrical distribution lines providing benefits to nearly 6,000 families were put in place. Principal partners included the U.S. PVO CARE in potable water with the local NGO CALMA furnishing water-related education; for rural roads, the General Directorate of Highways of the Ministry of Public Work (MOP); for electrical distribution lines, the Rural Electrification Unit within the Technical Secretariat for External Financing (SETEFE) of the Ministry of Foreign Affairs; and for all other activities, CHF.

ENVIRONMENTAL MANAGEMENT: Working again in tandem with CHF, USAID/El Salvador provided for improved environmental management focusing on the affected Lempa and Grande de San Miguel flood plains through a program that encompassed a number of activities. Conservation activities were carried out in 36 micro-watersheds with the total area reached by such activities amounting to 197 hectares. Activities in solid waste management focused on 10 communities and included community-led marches, campaigns, and clean ups, emphasizing at least in part the dengue epidemic. 533 hectares were re-forested, including 297 hectares from trees produced in community tree nurseries. Finally, roughly 3200 people received training in environmental management.

DISASTER MITIGATION: USAID/El Salvador helped prepare the country for future natural disasters. 3,015 community members (48% women) received training in the areas of disaster vulnerability, disaster preparedness, and implementation of early warning systems. Emergency committees that undertook the responsibility of producing disaster preparedness plans were established in 118 communities. These same 118 communities benefited from workshops in the areas of first aid, rescue techniques, shelter management, and methodologies for the evaluation of damage and needs. 36 hectares of environmental risk mitigation work was carried out in the municipality of Berlín; its community was most proactive in its support of the initiative, providing equipment. And 12 municipal emergency plans were reviewed and improved, in addition to the training of 146 disaster preparedness trainers.

Within the disaster mitigation work, an important focus was the strengthening of emergency management systems at the departmental, municipal, and community levels. A diagnostic of equipment needs for the departmental emergency operations centers (EOCs) was carried out; equipment was purchased for five EOCs; and EOC manuals were reviewed and strengthened. In terms of emergency equipment, 12 municipalities were furnished with emergency rescue equipment, 30 communities received emergency

medical kits, and 10 local emergency committees were allotted emergency communications equipment. And 20 communities were trained in disaster preparedness.

The United States Army Corps of Engineers (USACE) also developed a master flood control plan for the Lempa and Rio Grande de San Miguel watersheds, comprising specific initiatives for 12 municipalities.

8. LESSONS LEARNED:

USAID/El Salvador learned a number of lessons from Hurricane Mitch and other disaster recovery programs, many of which are being applied to our Earthquake Reconstruction Program.

Disaster Mitigation: Under its Mitch program, USAID/El Salvador trained 3,015 individuals from 118 communities and improved 12 municipal emergency plans. During the emergency phase of the earthquakes, the communities and municipal emergency committees trained in disaster preparedness, such as Chirilagua and Concepcion Batres, were able to receive assistance promptly. They were able to collect damage estimates and report them to the appropriate authorities quickly and, hence, were at the head of the line when emergency assistance was delivered. Owing to the success of this work, the Mission's earthquake reconstruction program also has a significant disaster mitigation component, the principal focus of which is work with 47 municipalities in the preparation of disaster management and land use plans.

Community Participation: Under the Mission's Mitch program, six major consultations with affected communities were held in the field in conjunction with ministries, implementing agencies, and the donor community with the aim of obtaining feedback from mayors and community leaders and to make adjustments to enhance program effectiveness. These consultations were most successful, reinforcing community participation and transparency.

Accountability: In order to ensure accountability under its 1986 earthquake and 1992 Peace and National Reconstruction Programs, USAID/El Salvador used financial and compliance monitoring services of independent CPA firms. By the time that Mitch struck, the GOES Court of Accounts had been strengthened through USAID assistance, having been qualified by RIG/San Salvador as able to perform audits of USAID funds. This represented a culmination of an intense seven-year effort during which USAID provided technical assistance and training. Hence, the Mission in coordination with RIG/San Salvador was able to arrange for timely audits of GOES implementing entities under the Mitch program, including the General Directorate of Highways of the Ministry for Public Works for rural roads and the Rural Electrification Unit within the Technical Secretariat for External Financing (SETEFE) for the electricity distribution lines. The Court of Accounts performed quality audits and reported the results to the Mission on a timely basis to prevent problems. As a consequence, no audit issues are outstanding under the Mitch program. Based on the successful Mitch experience, the Mission together with RIG/San Salvador is continuing to rely on the Court of Accounts to perform

timely audits of GOES entities responsible for elements of the Earthquake Recovery Program (FONAVIPO, FISDL).

Implementing Partners: Within its Mitch program, the Mission had most successful experiences with a number of implementing partners such as CHF (housing, schools) and CARE (potable water, latrines, and wells). These entities did high quality work. When the earthquakes struck, only 14% of the 500 houses constructed by CHF reported any damage, and the damage reported was minor; only 10% of the latrines constructed suffered damages; only one water system had minor damages, and these damages were immediately repaired by the community; and only 2 of the 57 schools repaired reported any damage (retaining walls). For its part, the U.S. Army Corps of Engineers prepared a well received master flood control plan for the Lempa River basin. USAID/El Salvador will be using each of these entities in its earthquake reconstruction program, including CHF (housing), CARE (potable water, housing), and the USACE (monitoring of housing construction and environmental safeguards).

Contracting: Within its Hurricane Mitch program, the Mission competed RFAs subject to funding availability. Hence, by the time that the Mitch legislation received approval and allowances arrived, USAID/El Salvador was ready to sign contracts and move with alacrity in implementation. The Mission also did Action Plans covering the entire Mitch period, some eighteen months; doing annual Action Plans would have produced delays. These innovations contributed importantly to the fact that the Mission's Hurricane Mitch program has come to a close sooner than had been anticipated by USAID/W, Congress, and the OMB – the end of FY 2001.

Cost-Sharing: Within its work for community infrastructure under its Mitch program, CHF had expected to cover cost-sharing requirements with contributions by the Germans through FISDL. When that fell through, it sought out the municipalities who also could not come up with the requisite monies because their coffers were empty owing to Mitch-mandated spending requirements. CHF also did not have monies of its own. Hence, CHF had to come back to USAID to re-negotiate the program, leading to program implementation delays. At the end, CHF achieved the original cost-sharing level with community, municipalities and other donor contributions, but this required an enormous effort that could have been invested in accelerate program implementation. Therefore, recognizing the need for a fast implementation of disaster assistance programs, under its earthquake reconstruction program, USAID/El Salvador is making sure that its agreements do not have unreasonable cost-sharing requirements, recognizing also that the actions that its implementing partners have already taken to address the major emergency needs of disaster-affected communities have left them with scant resources. Also, it is using ESF and IDA funds, which do not have counterpart requirements, for activities for which its partners are anticipated to encounter difficulties in coming up with the counterpart monies, such as the GOES.

9. SUSTAINABILITY:

In designing and implementing the Hurricane Mitch program, USAID/El Salvador paid particular attention to sustainability issues and matters, to ensure that the program would leave something behind.

For that work that emphasized wells, latrines, and potable water systems, the local water committees that were established are an important institutional development providing for sustainability. CARE, which implemented this program and also is the implementing entity for the Mission's core SO Health program in water and sanitation, is using core program funds to provide for important follow up, strengthening the local committees to provide for administration of the water systems in a sustainable fashion.

USAID/El Salvador also encouraged cost-sharing on the part of its beneficiaries. For instance, for the schools, beneficiary communities donated sizable amounts of construction materials, equipment, and labor, developments that augur well for future sustainability. In the case of the small infrastructure activities, local municipalities and communities provided valuable cost-sharing that will help maintain these activities. And for the environmental management activities that focus on reforestation and conservation activities in micro-watersheds, communities are exerting considerable efforts in taking care of the conservation works and the flora that has been planted.

In addition, in providing for sustainability, the Mission made ample use of technical assistance and training. The technical assistance in soil preparation and training in planting, management, harvesting, and marketing that farmers received likely will have an impact well into the future. In environmental management, the training that the Mission provided through CHF in tandem with 10 local NGOs to 3,200 people promises to contribute importantly to sustainability. As for disaster management, the training, workshops, and municipal emergency plans that were carried out, together with the assignment by the Ministry of Governance of workers to toil with CHF and the municipalities, provides for sustainability.

There were a couple of cases in which institutional arrangements were set up that will help provide for sustainability. In the case of the rural roads, the Ministry of Public Works has agreed to work together with the beneficiary municipalities to help maintain those that were rehabilitated. For the investment in electrical distribution lines, the mayors of the beneficiary communities have made an agreement with the national electrical company that they will maintain the lines.

Finally, in the case of housing, design innovations were introduced that will mitigate against future risks of damage from flooding and other natural disasters, developments that will help sustain these investments.

10. CORRUPTION & IMPROVED TRANSPARENCY:

The Hurricane Mitch supplemental required USAID to use a portion of the funding to improve the capabilities of host countries to resist corruption and improve transparency and accountability. The U.S. Embassy Country Team, including USAID, responded to this requirement in a multi-faceted manner. For its part, the Country Team signed an anti-corruption agreement with the GOES providing $950,000 for the National Civilian Police's Inspector General Office, the Attorney General's Office and the Office of Government Ethics. Of this amount, $350,000 was allocated for the Office of Government Ethics and the development of a code of ethics for government employees. This program was managed by a U.S. contractor, Creative Associates, under a grant agreement with USAID/El Salvador. The code of ethics subsequently has been drafted and is awaiting approval by President Flores. USAID's Regional Inspector General's Office (RIG)/San Salvador also provided courses on fraud awareness to USAID partner institutions responsible for Mitch program implementation. In addition, USAID's mission in El Salvador and RIG/San Salvador arranged for concurrent audits of certain component of the program based on risk analyses conducted by USAID/RIG. Finally, as a continuation of efforts to improve accountability and transparency in country, USAID/El Salvador requested El Salvador's Court of Accounts to perform audits of activities implemented by GOES entities; the entity had been qualified as able to perform audits of USAID funds by RIG/San Salvador.

This multi-faceted approach to dealing with transparency issues in country has meant that no major audit findings have been reported. Routine implementation problems were identified and dealt with on a timely basis. And, as a consequence, no audit issues are outstanding as the Mission comes to the close of its Hurricane Mitch program for El Salvador.

11. DONOR COORDINATION:

Donor coordination under USAID/El Salvador's Mitch program took place at four levels. Periodic meetings were held at the highest levels encompassing representatives from the principal donors, including Canada, Germany, Spain, Sweden, and the United States with Japan added at a subsequent date. The USAID Mission Director represented the United States Government at these meetings. Key topics at these meeting included resolving any problems that arose with the GOES and ensuring that donors made good on pledges initially made, amongst others. At the next level down, roundtable discussions were convened by the UNDP with technicians on a regular basis. These meetings, consisting of technical representatives from the donors, Government of El Salvador ministerial officials, personnel from local governments/municipalities, and individuals in private voluntary and non-governmental organizations, were held to prevent duplication of efforts and to devise solutions to any problems that had been encountered in program implementation. The third level of coordination was at the community level with municipalities and recipients of the Mission's Mitch programs. USAID convened six consultations in the field, described above, to assist in making emendations to provide for more effective program implementation. The last level of coordination took place directly

with the GOES. USAID held meetings with each of the affected GOES ministries to help preclude duplication and resolve any problems, e.g., Ministry of Education for schools, Ministry of the Environment for the environmental management interventions, the Ministry of Agriculture for its economic reactivation work with farmers, the Ministry of Health for potable water activities, Ministry of Public works for roads, SETEFE for the electricity distribution work, etc. Our implementing partners such as CARE and CHF participated importantly in these meetings. The end product of all this coordination was improved program effectiveness, witness the impressive results cited above.

12. COORDINATION WITH OTHER USG AGENCIES:

A number of other USG entities were involved in the Hurricane Mitch reconstruction effort in El Salvador, principally the Centers for Disease Control and Prevention (CDC), Department of State, Environmental Protection Agency (EPA), Federal Emergency Management Agency (FEMA), National Oceanic and Atmospheric Administration (NOAA), United States Department of Agriculture, United States Geological Survey (USGS), and USACE. In total, these entities contributed $6.9 million to the Hurricane Mitch reconstruction effort in El Salvador; the source for which coming from their CACEDRF allocations. The focus of their efforts included (a) CDC (enhanced disease surveillance capacity at the national level working with the Ministry of Health), (b) Department of State (anti-corruption), (c) EPA (improved quality of water through the provision of equipment and technical assistance to the Ministry of Health and the country's national water authority ANDA), (d) FEMA (assessment of the national emergency operations center), (e) NOAA (establishment of meteorological stations as well as participation in the installation and maintenance of the Rio Lempa Hydrologic Forecast System and the Rio Grande de San Miguel flood early warning system), (f) USACE (master flood control plan for the Rio Lempa and the Rio Grande de San Miguel basins), (g) USDA (rehabilitation of damaged watersheds), and (h) USGS (landslide monitoring reports focused on volcanoes and equipment such as stream monitoring gauges to help mitigate the damages associated with any future flooding).

USAID/El Salvador did three things to help ensure that the activities of these USG entities would provide for the greatest value-added. One, where there was an area focus of program activities, the Mission asked that they emphasize those areas of the country where the damage from Hurricane Mitch was most severe -- ten municipalities in the Departments of La Paz, San Miguel, San Vicente, and Usulutan. Two, utilizing its knowledge of what other donors were doing in country such as the IDB, the Central America Bank for Economic Integration, and the Japanese, USAID/El Salvador coordinated with these donors to ensure that there would be no duplication of effort between their work and that undertaken by these other USG entities. Three and last, the Mission put the USG entities in touch with the main contacts within the various ministries to help them coordinate their program activities with the GOES and provided support to facilitate coordination with other implementing agencies such as U.S. PVOs and local NGOs. This ensured that their program activities responded to the expressed needs of the country.

For information purposes, and according to USAID knowledge and understanding, Attachment III presents a summary of other US Agencies work implemented in El Salvador.

ATTACHMENT I

UNITED STATES GOVERNMENT: HURRICANE-MITCH ASSISTANCE FOR EL SALVADOR
(U.S. Millions)

EMERGENCY PHASE	**5,489,070**
USAID	5,068,508
Office of Foreign Disaster Assistance	1,128,451
(Ambassador's Disaster Assistance Authority)	(25,000)
(Assistance in Kind)	(98,451)
(Water & Sanitation/CARE)	(1,000,000)
(Logistical Support)	(5,000)
USAID/El Salvador	3,940,057
(Reprogramming from existing activities)	(3,940,057)
UNITED STATES DEPARTMENT OF DEFENSE	420,562
Engineering/Design Support	297,044
Military Hospital/Medical Readiness Exercises	123,518
RECONSTRUCTION/RECOVERY PHASE	**44,718,501**
USAID	25,800,000
USAID/EL SALVADOR CACEDRF*	24,800,000
USAID/EL SALVADOR CSD**	500,000
OFDA	500,000
DEPARTMENT OF DEFENSE	5,000,000
New Horizons Program	5,000,000
DEPARTMENT OF AGRICULTURE (USDA)	5,000,000
USAID/G-CAP CACEDRF	2,000,000
CACEDRF ALLOCATIONS TO OTHER USG AGENCIES	6,918,501
Centers for Disease Control & Prevention	1,932,768
Department of State	950,000
Environmental Protection Agency	930,000
Federal Emergency Management Agency	500,000
National Oceanic & Atmospheric Admin	1,184,000
USDA	206,733
United States Geological Survey	1,215,000
TOTAL	**$50,207,571**

*Central America and the Caribbean Emergency Disaster Recovery Fund
**Child Survival & Disease

ATTACHMENT III

USAID/EL SALVADOR MITCH RECONSTRUCTION COMPLETION REPORT
OTHER US AGENCIES ASSISTANCE

For information purposes, and according to USAID knowledge and understanding, below is a summary of other US Agencies work implemented in El Salvador.

CDC ($1.933 million): For its part, CDC planned, organized, and developed the first National Congress of Epidemiology that included the participation of 150 health sector staff. With CDC help, 39 staff members graduated, securing the Qualified Diploma in Data for Decision-Making; another 80 staff completed the coursework for the "Principles of Epidemiology" with the final exam for the class administered this January. Also, CDC prepared and implemented an anti bio-terrorism plan and produced an epidemiological surveillance guide for HIV/AIDS. Other accomplishments have included (a) the development of a preliminary information system work plan for diseases, (b) a functioning situation room that is generating useful information for the control and prevention of priority pathologies, (c) the production of a national pilot plan for sentinel surveillance in hospitals, (d) equipment and reagents for the central laboratory and national laboratory network, (e) the improvement of two laboratories (Las Presitas and La Union), (f) the preparation of four manuals and their delivery to laboratories, and (g) community interventions in the control and spread of dengue. Finally, CDC has obtained $30,000 from the U.S. Military Group in El Salvador that is being utilized to identify transmission routes and pathogenic agents that cause vector and rodent-borne diseases in the country.

EPA ($930,00): Focusing on water quality, the EPA program was formalized through a 3-step process that included gaining El Salvador high-level administrative support, developing an El Salvador team to conduct Comprehensive Performance Evaluations (CPEs), and establishing a select operators' training program to address the most important factors limiting performance of surface water treatment plants. A key EPA intermediary was ANDA where the focus was assessing the performance of El Salvador's treatment plants. Having introduced the CPE for all El Salvador's water treatment plants, EPA held workshops attended by officials from the Pan American Health Organization, the El Salvador Ministry of Health and ANDA. These individuals will be responsible for the conduct and transfer of CPE capabilities to other water treatment professionals in Latin America. The first in-country demonstration of a CPE was performed at the Guluchapa Water Treatment Plant in El Salvador, the main one serving metropolitan San Salvador.

DEPARTMENT OF STATE ($950,000): For a description of its activities, please refer to paragraph #14 above on Corruption & Improved Transparency.

FEMA ($500,000): FEMA evaluated the National Emergency Committee's emergency command center, as well as a representative departmental command center, providing recommendations and plans for improvements. The anticipation is that the recommendations for the representative departmental command center could be applied

to such centers nationwide. The Agency also reviewed COEN's national response plan, finding it to be technically comprehensive and well prepared, as well as providing recommendations for its further improvement. In addition, FEMA through CHF implemented specific landslide mitigation initiatives in three municipalities (Alegria, Berlin, and Usulutan).

NOAA ($1,184,000): NOAA installed four meteorological stations, in addition to reconstructing and improving meteorological data collection networks. The entity also improved the geodetic networks, including putting in place tide gauges, developing satellite data receiving and processing, and providing analysis for the newly-created forecast center. It also worked with the Ministry of Environment on a Gulf of Fonseca water and sediment quality analysis component. In addition, it assisted in the establishment of the alert flood forecast systems for the Lempa and Rio Grande de San Miguel rivers. Finally, it provided extensive technical support to the establishment of the Government of El Salvador's new earth sciences agency SNET (Servicio Nacional de Estudios Territoriales).

USACE (USACE did not allocate any of its own monies to the Mitch reconstruction effort in El Salvador; it was funded with the Mission's Hurricane Mitch monies under a PASA arrangement): The principal focus of USACE's in country efforts was the preparation of a study of the Rio Lempa and Rio Grande de San Miguel river basins and floodplains that provided long-term recommendations regarding measures that could be taken to reduce the devastation caused by any future floods. These measures were presented on a prioritized basis. This major report was complemented by a number of more specific reports that amplified on themes developed in the larger study. These themes consisted of improved watershed management, site specific flood damage reduction measures, and landslide control interventions. One such specific report related to the San Felipe Flood Canal, proposed to help channel water flows away from flood-prone areas and an action that would require an investment of $14.2 million. All these studies were carried out by a team comprised of employees of USACE, USAID/El Salvador, the GOES Ministries of Agriculture (MAG) and Environment and Natural Resources, and consultants, as required. The conclusions and recommendations of the larger report were presented to the GOES and representatives from the international donor community to enlist their financial support. Working closely with communities in the ten coastal municipalities that were most severely affected by Hurricane Mitch, USACE also identified a number of shorter-term measures, some of which were implemented by CHF -- USAID's key partner in the environmental management component of its Hurricane Mitch program.

USDA ($207,000): The overall goal of the USDA program was the rehabilitation of damaged rural watersheds through strengthened local capacity. In partnership with CHF, USDA worked principally to protect a total of 143.5 hectares located in the Quebrada El Tránsito and El Encantando watersheds. It also carried out 20 small projects for the recovery and protection of Mitch-affected watersheds, coordinating with CHF and some 45 Peace Corps Volunteers.

USGS ($1,215,000): The USGS provided technical support in the area of hydrological monitoring, installing three telemetric stations in the Rio Lempa Watershed and two in the Rio Grande de San Miguel. The stations are connected to a forecast center. This is

providing real time data on the flow that is circulating in these important, flood-prone rivers, making possible timely alert in the event of a flood or a heavy rainstorm. The USGS also developed landslide/landslide hazard maps for the main Mitch-affected areas as well as three urban sites. This has become a most useful tool for the Mission's Earthquake Recovery Program, principally that component in which the environmental risks of potential reconstruction sites are assessed. In addition, the USGS provided specialized training in the areas of Geographic Information Systems for four municipalities (Berlin, La Palma, Jiquilisco, and San Salvador) and computer software. Finally, as part of the Mitch project, the USGS provided technical support to the GOES, principally in the form of seismic, volcano, and landslides monitoring, during the 2001 earthquakes.