

## A. Justification

### Central America Water and Sanitation Program Sustainability Evaluation and Qualitative Interview

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## Executive Summary

The Centers for Disease Control and Prevention (CDC) and the American Red Cross (ARC) have been collaborating on an evaluation of the long-term public health benefit of ARC water, sanitation and hygiene education (WASH) programs. Based on past work, ARC and CDC are in a unique position to develop and pilot models that aim to answer the question of sustainability.

This sustainability work will collect information on the WASH program at the 10-year mark in 15 to 16 communities post completion of ARC interventions since 2002. Program evaluation is targeted at the community-level and collects data from the community's perspective on evaluating sustainability. Questionnaires at the household level will provide the data necessary for calculating the performance indicators that describe the sustainability of the WASH interventions. The infrastructure evaluation looks at the physical structure of the water and sanitation interventions. Water samples will be analyzed to determine the presence or absence of coliform bacteria to evaluate the water source, water system, and stored household drinking water. For communities that use chlorine for disinfection, a free chlorine test will be done to determine if water systems are providing adequate water treatment distributed to homes.

These results will identify the factors that promote sustainability. The benefits of this collaboration will improve and inform other Red Cross (RC) WASH projects in the Americas region so that successful models and practices become part of their normal repertoire. In addition, CDC and ARC will develop expertise in water, sanitation and hygiene promotion, continue evaluation and research, strengthen community outreach capacity, build local relationships, and establish relationships with government and other service providers to pilot follow-up systems. All these tasks will inform the development of policy and practice within the RC and the humanitarian sector in general to develop programs that are sustainable.

## **A. Justification**

### **1. Circumstances Making the Collection of Information Necessary**

This Information Collection Request (ICR) is classified as: **New**

#### **Background**

Hurricane Mitch hit Central America in 1998 and was recognized as the deadliest Atlantic hurricane since the Great Hurricane of 1780 (NOAA, 2009). It primarily affected the Central American region. Damage to infrastructure left the population without water and sanitation and other services. The American Red Cross (ARC) responded to the disaster and provided community- and household-level water, sanitation and hygiene education (WASH) interventions to hundreds of communities.

In 1999, at the request of the ARC, the Centers for Disease Control and Prevention (CDC) was asked to evaluate the impact of the ARC WASH programs in the four countries most impacted by the hurricane (El Salvador, Guatemala, Honduras, and Nicaragua). The purpose was to see the effects of the ARC's integrated WASH program on the health of these communities. Eight communities, two per country and approximately 800 households across the region, were selected by the ARC and were surveyed for three consecutive years, 2000 (baseline), 2001 (mid-term) and 2002 (final). CDC provided technical assistance on this three-year health study which included developing the appropriate study design, sample size estimates, questionnaire development, in-country interviewer training, oversight during data collection by the ARC, and data evaluation. Data collection was funded and collected by the ARC and its in-country volunteers with CDC oversight.

The final evaluation in 2002 found that the ARC post-Hurricane Mitch WASH interventions generally were quite successful in meeting both programmatic and health impact goals, seeing a 25% reduction in childhood diarrhea from baseline to final. The evaluation, however, was somewhat limited in its ability to address longer-term sustainability of the interventions because of the short time frame in which it took place. Based on the recommendations from the three-year health study, the CDC again provided technical assistance to the ARC for two additional evaluations, 2006 and 2009, to look at sustainability. Technical assistance from the CDC included study design, sample size estimates, questionnaire design, oversight during data collection by the ARC, and data evaluation. The ARC provided the funding and logistics for these studies.

The 2006 and 2009 follow-up evaluations completed by the ARC with support from the CDC showed that while still greatly improved from baseline, achievements from the interventions were declining. Hygiene behavior based interventions such as hand washing and maintenance of hygienic latrines were noted to decline the most. Results showed that no significant improvements to the interventions could be made in these communities for a variety of factors, i.e. lack of technical expertise, lack of funds, lack of proper materials for repairs to the water system and latrines. Significant annual weather events contributed to these issues.

Since 2009, interim work by the ARC, expected to be in place by 2012, aims to develop programs to build local capacity and seek out local technical and financial support to maintain and hopefully improve the interventions.

There is a need to return to these communities at the 10 year mark to look at the factors that promote the sustainability of WASH programs. There is limited information in the literature that looks at an integrated WASH program over this timeframe. Funding and technical support by the ARC has not been provided to these communities, for the most part, since after 2002.

CDC will return to these communities and gather data on how the WASH programs are being maintained and evaluate the sustainability of the ARC program. It is not known if once this local support is provided, if these communities have the capacity to make infrastructural improvements and go beyond just maintaining the initial interventions.

Understanding the factors that promote sustainability will aide in maximizing the investment made in these communities and provides a framework for other agencies to implement their programs globally. Factors that go beyond the interventions are not evaluated nor are they followed out for more than a few months or, in some cases, a few years. Successful WASH projects will help to attain Goal 7 of the Millennium Development Goals (MDGs).

Goal 7 of the MDGs by the United Nation seeks to ensure environmental sustainability and reverse the loss of environmental resources (United Nations, 2009). Specifically, one target for 2015 is to “reduce by half the proportion of people without sustainable access to safe drinking water and basic sanitation.” Specifically in the Latin American and Caribbean region, 20% of the rural population in 2008 had no access to an improved drinking water source. Forty-five percent of this population also has unimproved sanitation facilities with 20% of that population still practicing open defecation (WHO/UNICEF, 2010). The status in this region indicates the need for continued improvements in access to WASH programs to ensure community health. The problem is that traditionally, after these interventions have been provided, either post-disaster or otherwise, little information becomes available on the longevity of their health-related effects and behavior changes.

There is a large body of scientific literature that focuses on WASH interventions in other countries and some that focus on the Central American region (El Salvador, Guatemala, Honduras, and Nicaragua). Most of the published studies done in communities’ post-intervention are followed for short periods of time, from as little as three months, and up to nine years.

Studies in other countries, such as one Karachi Pakistan, focus on hand washing with soap provided over 9 months and followed up 18 months after (Luby, et. al., 2009). Another study looked at hygiene behavior change nine years after the end of a multifaceted hygiene promotion intervention in Kerala, India (Cairncross, et. al., 2005). The focus of this study was behavior change and latrine use. Review of a 1990 technical report by the Environmental Health Project (EHP) evaluated health benefits from improvements in water supply and sanitation from a series of studies. The focus was on reduction of specific diseases but none in the Central American region (EHP, 1990).

Relevant literature to the Central American region was found. The 2001 EHP Technical Report assessed the impact of a WASH program in Nicaragua after Hurricane Mitch. Improvements in health could be measured in the 2-year time frame. However, one of the key lessons learned was that long-term follow-up was needed (EHP, 2001). An unpublished report (master's thesis) was reviewed as it took place in Honduras. The focus of this work was on the influence of hygiene practices on childhood diarrhea. Women were aware of illness transmitted via water, but social factors were found to play a role in sustained hygiene. The conclusion was that there was a need for continued implementation of a hygiene promotion intervention (Bravo Alcantara, 2008). A published study in Honduras looked at WASH in combination with ethnographic data, medical chart reviews and immunoassays (Deal, et. al, 2010). Another published study was done in Guatemala. The focus, however, was only on water treatment and hand washing practice with soap. The intervention was provided over three years and followed up only after six months (Arnold, et. al., 2009).

The literature, although available, does not evaluate a WASH intervention after 10 years.

This study at the 10-year mark is aimed at collecting comparable data to estimate the same indicators and evaluate the communities that received this interim technical assistance compared to communities that did not receive any kind of follow-up since 2002. Under Section 301 of the Public Health Service Act (42 U.S.C. 241), this proposed work is in line with the prevention of physical impairments to man with regard to water and sewage treatment.

In carrying out this study, we are making available, through publications and other appropriate means, results of this work that have practical application in development projects where sustainability is a key factor.

CDC, under Section 301 of the Public Health Service Act (42 U.S.C 241) has the authority to conduct research relating to the sustainability of WASH programs. An epidemiological study with statistical methods will be used to evaluate these interventions to determine the key factors to sustainability of these projects. Data collection authority is found in Section 301 of the Public Health Service Act (42 USC 241) (Attachment 1).

#### Privacy Impact Assessment

No personally identifiable data will be collected but all data collected will be secured in a locked file cabinet accessible only by project staff members.

#### Overview of the Data Collection System

Data collection will take place in 15 to 16 communities in four Central American countries - El Salvador, Guatemala, Honduras, and Nicaragua. All survey instruments will be translated into Spanish and all data collection will be conducted in Spanish. The information that will be collected for this study will include the following:

- Community survey with the community leaders and/or water board using a paper survey (Attachment 3). A list of people attending the meeting will be collected but responses to

the questions asked of the community will not be reported on a per person basis. Data will be stored in a locked file cabinet and individually reviewed and summarized for the final report.

- Face-to-face interview with female head of household (quantitative survey) (Attachment 4). Data will be collected and recorded using a personal data assistant (PDA). Each household will be coded but not specific to that home. Coded data will include the household number, initials of the country, initials of the community and initials of the CDC interviewer. Results will be compiled on a daily basis into one electronic database for statistical analysis on a regional basis.
- Face-to-face interview with female head of household (qualitative key informant interview) (Attachment 5). The interview will be tape-recorded. Data will be coded but not to a specific person or home. Coded data will include the household number, initials of the country, initials of the community and initials of the CDC interviewer. Tape recordings will be transcribed once all the data has been collected and put into an electronic format for statistical evaluation on a regional basis.
- Water samples collected from households and water systems/water sources in each community.
  - Household and community water samples are tested for the presence or absence of total coliforms and E. coli using a pre-measured Hach test kit. Results for each water sample will be logged into a field notebook and transferred to an electronic spreadsheet and evaluated on a community basis for the final report.
  - Community water system samples that report the use of chlorine for disinfection will also be tested for free chlorine using a Hach test kit. Results of this test will provide a concentration that will indicate if proper levels of chlorine are being used in the water system. Household water samples will also be tested for residual free chlorine in the communities that report chlorine use for disinfection. Results will be logged in a field notebook and summarized in the final report.
- Infrastructure survey done by CDC personnel using a paper survey/checklist (Attachment 6). Data will be stored in a locked file cabinet and individually reviewed and summarized for the final report.

All data collected in this study will be stored for up to five years until the final report and potential publications can be completed.

#### Items of Information to be Collected

CDC and our collaborator are not collecting IIF.

The information to be collected at the household and community level are related to water use, water systems, water availability, maintenance and use of a latrine, and the occurrence of hygiene education programs provided to each community and household. Names of each head of household encountered will not be recorded. Data from each household will be coded with

the household number, initials of the country, initials of the community and initials of the CDC interviewer.

### Identification of Website(s) and Website Content Directed as Children Under 13 Years of Age

No web-based data collection method or associated website will be established with this study. Respondents in this study live in rural areas and do not have access to a computer with internet access.

## **2. Purpose and Use of Information Collection**

The purpose of this information is to understand the factors that promote sustainability and to promote and implement sustainable WASH programs. Significant investments are made to rebuild communities post-disaster, as well as through development projects. Safe drinking water, adequate sanitation, and hygiene are the three most important conditions for keeping communities healthy and contribute to the prevention and control of disease. The results of this study can be generalized to all post-disaster and development projects within the Red Cross and used by organizations that promote sustainability.

The criteria for a community to be included in this study are for it to have received the entire ARC program-water system, sanitation facilities and hygiene education. Currently there are eight communities that have been periodically surveyed. An additional seven to eight communities will be included. The additional eligible communities will be identified by the local Red Cross (RC) societies selected from an existing list of post-Hurricane Mitch communities that were part of the ARC program. A systematic but random system will be used to select households in a community. Households that access water from the ARC water distribution system will be eligible to be interviewed. Every xth house in each community (the total number of households in the community divided by 15 or 16) will be included. If no one is present at a selected home, then the next house will be approached until the appropriate number of households is reached. In total, 15 to 16 communities are sufficient for program evaluation to determine sustainability.

CDC can use the results of this study to develop WASH-related recommendations on key factors that promote WASH program sustainability. These results will be utilized by our collaborator (ARC) to further strengthen current and future WASH programs and to address long-term sustainability. In addition, CDC can promote the development and implementation of these types of programs to other WASH organizations by disseminating the results of this data collection through reports and scientific publications in appropriate peer-reviewed journals that are directed to both domestic and international audiences. These results will also be shared through presentations at conferences, meetings and workshops that are attended by non-governmental agencies (NGOs) and other international aid agencies.

This data collection will have practical application as the results will help build local capacity in WASH-related areas, leading to lasting health improvements for affected communities. This data



collection will also assist in the development of local partnerships that can offer technical assistance to communities with their WASH interventions.

#### Privacy Impact Assessment Information

This information is being collected to strengthen the ARC's integrated WASH approach provided to communities. A sustainability evaluation has not been done over a 10-year time period. This differs from most studies in that interim local support is being established with the intent that the communities can improve or have assistance in maintaining their WASH interventions. It will benefit countries in Central America and other countries where an integrated WASH program can be implemented.

No IFF is being collected, as also noted in section 1.4. This proposed data collection will have little or no effect on the respondent's privacy. All data will be coded with the household number, initials of the country, initials of the community and initials of the CDC interviewer. Information gathered will be on water use, water systems, water availability, maintenance and use of latrines and the occurrence of hygiene education programs provided to each community and household. The information gathered in this research will be used internally by CDC staff and our collaborator to improve on integrated WASH programs.

### **3. Use of Improved Information Technology and Burden Reduction**

The data collection by CDC will use a combination of methods, using paper questionnaires and electronic data collection. The community survey and infrastructure evaluation will be done using a paper questionnaire. The community survey will be done in a group setting where multiple answers from the attendees at the meeting will be captured by handwritten notes. The infrastructure evaluation is a checklist of the condition of the water system and sanitation facilities completed by CDC personnel.

Data collection from the household interviews will be done using a PDA for the quantitative survey. The key informant interviews will be taped using a recording device. Use of the PDA will expedite data evaluation as daily downloads of the data collected can be summarized and evaluated. The key informant interviews are tape recorded and transcribed upon return to Atlanta. This is the standard method of data collection for this type of interview to capture every response provided by the respondent.

Electronic respondent reporting will not be done. Many of these communities are in rural areas. Study participants have limited to no access to a computer with internet access. In addition, respondents may potentially be at a low literacy level which would further limit participation if the ability to read and respond to questions were criteria for participation.

### **4. Efforts to Identify Duplication and Use of Similar Information**

CDC conducted a literature review (Pub Med) to determine if a similar data collection has been done in this region. This data collection activity is unique in that it is a program evaluation of WASH interventions. Other similar studies are available, however, no journal articles could be found that evaluate a three part WASH program after 10 years. Additionally, CDC has

participated in workshops and conferences in the global health arena (World Water Week, Water and Health Conference) and has not identified other duplicate studies to date on sustainability. Similar data has been collected in Guatemala, Honduras, and Nicaragua. None of these studies provide an evaluation of the sustainability of a WASH program. The study by Arnold, et. al. (2009) in Guatemala looked only at water treatment and hand washing practice with soap. The intervention was provided over three years and followed up only after six months. The studies in Honduras provided results on hygiene behavior change (Bravo Alcantara, 2008, Deal, et.al, 2010). The 2001 Technical Report by the EHP evaluated health benefits from improvements in water supply and sanitation post-Hurricane Mitch in Nicaragua (EHP, 2001) but sustainability was not evaluated. These studies do not address the sustainability of a three-part WASH program.

CDC periodically and regularly reviews the literature to keep abreast of the ongoing work in this area and to avoid duplication. There are little data available on sustainability factors in WASH programming or on program evaluation on this subject matter.

## **5. Impact on Small Businesses or Other Small Entities**

No small businesses or other small entities will be involved in this data collection.

## **6. Consequences of Collecting the Information Less Frequently**

This request is for a one time data collection. Respondents will be asked to respond one time only to the quantitative household survey or the key informant interview. Each household is only eligible to be interviewed once. This data collection will be conducted 10-years after the completion of an integrated WASH program. Interim activities have been implemented and this data collection is needed to evaluate the impact of these activities. Results of this work will confirm that certain activities contribute to or detract from WASH program sustainability.

This activity is in line with the research agenda of making available study results that relate to the prevention of waterborne disease associated with water systems and sanitation. This project would be beneficial to the ARC and other NGOs and health organizations. Investments in WASH programming can be optimized and designed to be sustainable.

There are no legal obstacles to reduce the burden.

## **7. Special Circumstances Related to the Guidelines of 5 CFR 1320.5**

There are no special circumstances related to this data collection. This is a one time data collection and respondents are not asked to complete any kind of written response. No documents, records or confidential information of any type will be requested from the respondent.

This request fully complies with the regulation 5 CFR 1320.5.

## **8. Comments in Response to the Federal Register Notice and Efforts to Consult Outside the Agency**

- A. 60-day notice was submitted and Federal Register Notice (FRN) was published in the Federal Register on October, 21, 2010, project number 0920-11AA, vol. 75, No. 203, pp.65019-65020 (Attachment 2). There were no public comments received in response to this FRN.
- B. The following people have been consulted throughout the development of this work plan:
- a. Gonzalo Aquino  
Zone WatSan and Hygiene Promotion Coordinator  
International Federation of the Red Cross Red Crescent  
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Mr. Aquino has been associated with this project since its inception in 1999. He is a water and sanitation delegate initially with the ARC during the post-Hurricane Mitch project and now with International Federation of the Red Cross Red Crescent as a zone coordinator. He has worked with CDC since 2009 and the key person during that field evaluation, and our liaison with the local RC societies. He is currently working on the development of this project and has provided consultation on working with these communities in 2012.

Mr. Garcia and Ms. Wade are with the ARC and have been associated with this project since 2009. They are based in the US and deal with all projects for the ARC in the Latin America and Caribbean region. Their consultation has helped to guide how this project should be focused based on the results from the initial work done post-Hurricane Mitch. The results post-Mitch has been instrumental to improving their water and sanitation programming.

## **9. Explanation of Any Payment or Gift to Respondents**

No payments or gift of any kind will be provided to respondents who volunteer to participate in this study.

## **10. Assurance of Confidentiality Provided to Respondents**

No personal identifiers will be collected in this study. Questionnaires will be coded but will not be associated with a specific person or household. Each household visited will be coded with the household number, initials of the country, initials of the community and initials of the CDC interviewer. Data will be evaluated and made generalizable to the region. This study is limited to household and community participation. No local organizations will participate in this study.

This submission has been reviewed by ICRO (the Information Collection and Review Office) who determined that the Privacy Act does not apply as personal identifiers will not be collected. The community survey will have an attendance list but all responses during the interview will not be associated with any one individual. Household surveys will be coded with the household number, initials of the country, initials of the community and initials of the CDC interviewer. Audio tape recording will also be coded in the same manner and transcribed for use by CDC when writing the final report. Paper surveys and audio tapes will be stored in a locked file cabinet and accessible only by project staff. The audio tape recordings will be destroyed five years after the end of the study, February 2017.

### IRB Approval

This proposed data collection has been evaluated to determine if it is human subject's research requiring Institutional Review Board (IRB) approval. A CDC official has determined that the primary intent of this work is public health program activities and that this data collection is not research. The primary activity is evaluating the sustainability of WASH interventions so that results can be used to make community improvements. Program evaluation will be done at the community level. The "Determination of Applicability of Human Subjects Regulations" form was completed and signed on February 2, 2011. A copy of this document is provided as Attachment 7.

### Privacy Impact Assessment Information

- A. This submission has been reviewed by ICRO who determined that the Privacy Act does not apply. No personal identifiers will be collected. All data will be coded with the initials of the country, the community and the interviewer. The applicable System of Records Notice is 09-20-0147 "Epidemiologic Studies and Surveillance of Disease Problems".
- B. Data collection will be done using electronic data entry and paper surveys. Paper surveys and audio tapes will be secured in a locked file cabinet, accessible only to project staff. Audio recordings will be destroyed five years after the end of the data collection, February 2017.
- C. Respondents will provide verbal consent. The interviewer's script is provided in Attachment 8 and read out loud to each potential respondent. Respondents will be informed that the findings of this work will be used by CDC to make improvements in the ARC programming and shared with other entities through publications that will

inform the public health community at large. Specific results of the water testing and select indicators will be reported back to the community as a summary report.

- D. The interviewer's script informs the respondent that their participation in this study is voluntary and they are free to decline responding to any specific question in the survey. The respondent will be informed that no information on their identity is required to participate. Their responses will not be used to exclude them from any of the community services. The respondent will also be asked for a household water sample to be tested for coliforms. Provision of a water sample is also voluntary. The results of the water test will be provided in summary to the community at a later date and will be used by CDC in preparing the final report.

All information provided by respondents will be treated in a secure manner and will not be disclosed unless otherwise compelled by law. Data security procedures will be described to respondents in the consent form (see Attachment 8). However, no IIF is being collected.

## **11. Justification for Sensitive Questions**

Sensitive questions will not be asked of participating respondents. There are no questions on criminal behavior, sexual behavior and attitudes, alcohol or drug use, religious beliefs, race or ethnicity. Questions that will be asked of each household and participant include:

- water use, water access, water quantity, water quality
- latrine use and maintenance
- hygiene education

## **12. Estimates of Annualized Burden Hours and Costs**

- A. The burden hour estimates are based on ARC's past experience in these communities from conducting the health study back in 2000-2002. For this study, we expect to conduct 15 to 16 community surveys across four countries in Central America. Eight communities that will be re-visited are already a part of this study, plus an additional seven or eight communities, that have never been surveyed before by CDC will be selected. The community leaders and/or members of the water board in every community in every country will be interviewed. The criteria for a household to be included in this study are that it had received the ARC WASH interventions. There will be a maximum of 256 quantitative household surveys completed, a maximum of 16 households in 16 communities. A maximum of 32 key informant interviews will be done concurrently from two randomly selected households in the 16 communities across four countries. A household is only eligible to be interviewed once. Additionally, up to 320 water samples will be collected from households that store drinking water and from community water sources and water systems (256 quantitative households plus 32 key informant interviews plus 32 community water samples, a minimum of two per 16 communities). The infrastructure survey and water sampling activity is not included in the burden table as CDC will complete this survey and activity independent of input or assistance from community leaders or study participants. The maximum total annual burden for data collections is approximately 240 hours as shown in Table A. 12.1.

Table 12.1 Estimated Annualized Burden Hours

Type of Respondent	Form Name	No. of Respondents	No. of Responses per Respondent	Average Burden Response (in hours)	Total Burden Hours
Community group-men and women	Community survey	16	1	1	16
Female head of household	Quantitative Household survey	256	1	45/60	192
Female head of household	Key informant interview	32	1	1	32
Total					240

B. The hourly wage rate is based on the most recent wage published by the U.S. Department of State 2008 Human Rights Report, Bureau of Democracy, Human Rights, and Labor (February 25, 2009). Monthly or daily wages were obtained for each country from the 2008 Country Reports on Human Rights Practices, found at the following website <http://www.state.gov/g/drl/rls/hrrpt/2008/index.htm> (accessed November 16, 2011). The hourly wage rate is estimated for workers in the agricultural industry. This wage classification was used because the project will be conducted in rural/agricultural areas. Monthly or daily wages were provided in US dollars and converted to a regional average hourly wage for all countries and used in Table A. 12.2. A table is provided as Attachment 10 which presents the calculations for estimating the regional hourly wage.

Table 12.2 Estimated Annualized Burden Costs

Type of Respondent	Total Burden Hours	Hourly Wage Rate	Total Respondent Costs
Community group-men and women*	16	\$0.53	\$8.48
Female head of household	192	\$0.53	\$101.76
Female head of household-key informant interviews	32	\$0.53	\$16.96
Total			\$127.20

\* Community surveys can be completed by one or more participants; however, the questions asked of the community will not be reported on a per person basis. A list of people attending the meeting will be collected.

### 13. Estimates of Other Total Annual Cost Burden to Respondents or Recordkeepers

There are no other costs to respondents or record keepers from the collection of this information. There are no capital and start-up costs or operation, maintenance nor purchase of services.

### 14. Annualized Cost to the Federal Government

The total annual cost to the Federal Government will not exceed \$250,000. The cost includes funding for the ARC collaborator to facilitate this project. The ARC will provide support to this

project through participating local Red Cross National Societies and logistics i.e. travel within each country. This also includes travel and per diem for a team of five CDC people to travel for a minimum of 20 days. The team will conduct the community and household surveys and interviews and the infrastructure evaluations. Miscellaneous supplies will cover water sampling kits for up to 300 water samples to analyze for the presence or absence of coliforms and free chlorine testing. The annualized costs to the government is summarized in Table A. 14.1

Table 14.1 Annualized **Cost to the Government**

<b>Estimated Cost</b>	<b>Cost</b>
Salaries	\$46,900
Per diem	\$18,600
Travel	\$9,000
Miscellaneous Supplies	\$1,300
Contract Costs	\$170,000
<b>Total</b>	<b>\$245,800</b>

### 15. Explanation for Program Changes or Adjustments

This is a new data collection.

### 16. Plans for Tabulation and Publication and Project Time Schedule

OMB approval is requested prior to conducting the field work. This study is planned to begin February 2012 to be consistent with the previous data collections which were done during the dry season. We will conduct up to 16 community surveys, 288 household surveys (which includes the household surveys and key informant interviews) and collect up to 300 water samples to test for coliforms throughout four Central American countries. The entire data collection will be completed within one month.

Table 16.1 provides specific data collection activities expected to take place for this project.

Table 16.1 Project Time Schedule

Activity	Time Schedule
Project planning-includes pre-testing surveys, practicing data collection using PDAs, data base set-up	5 months
Field work activities	1 month
Data analysis/data cleaning	1 month
Report preparation	3 months
Publication	12 months

### 17. Reason(s) Display of OMB Expiration Date is Inappropriate

We are not requesting exemption from displaying the OMB expiration date. The OMB expiration date will be printed on every survey document used.

## 18. Exceptions of Certification for Paperwork Reduction Act Submissions

There are no exemptions to the certification.

### References

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