



U.S. Department of Agriculture



Office of Inspector General
Northeast Region

Audit Report

RURAL DEVELOPMENT
Homeland Security Issues

Report No. 85099-1-Hy
February 2004

Executive Summary

**Rural Development, Washington, D.C., Homeland Security Issues
(Audit Report No. 85099-1-Hy)**

Results in Brief

Rural Development funded business, housing, and utilities are key elements in America's rural infrastructure. Thus, it is important to ensure that risks related to manmade or natural disaster are identified and mitigated in ways that ensure the ability of the Rural Business Service (RBS), the Rural Housing Service (RHS), and the Rural Utilities Service (RUS) to continue meeting Congressionally mandated missions to support economic development; ensure access to safe, sanitary housing; and provide for reliable utility services in rural America. According to Tom Ridge, Secretary of Homeland Security, "the homeland is only secure if the hometown is secure." To this end, we reviewed the actions taken by the three Rural Development agencies to ensure the security of borrowers, the rural infrastructure, and the people of rural America.

Our review of RBS activities and RBS financed facilities did not identify any significant risks related to homeland security issues other than the risks to which all small businesses are exposed. We noted that the agency had taken a proactive stand in identifying those borrowers and applicants for loans that had potentially suspicious purposes or activities (e.g., loan for purchase of a crop duster airplane, etc.).

In general, RHS housing activities and related loans did not present any unique risks or vulnerabilities to terrorist activity. The community facilities loan program borrowers we reviewed had developed and implemented effective emergency response plans. Further, we noted that personnel at facilities that had received funding from RHS in New Jersey played key roles in response to the destruction of the World Trade Center. For example, a mental health facility with multiple community facility loans responded with disaster counseling for victims and for rescue personnel.

Although the Administrator expressed support for our audit, RUS officials initially contended that there was not a need for additional emphasis in the area of security for RUS funded electric, telephone, and water systems. Our review disclosed that the electric and telephone borrowers we visited had generally taken steps to plan for emergency situations. However, the rural community water facilities we reviewed had not taken the steps needed to ensure the uninterrupted supply of clean drinking water in the event of natural or manmade disaster.

Based on an assessment of RUS policies and procedures and our reviews of ten judgmentally selected water facilities, we concluded that RUS runs the risk that some water supplies for rural Americans may be interrupted in times

of natural disaster or terrorist attack. This risk is elevated, in part, because the agency did not ensure that RUS borrowers have assessed the vulnerabilities of water systems and prepared effective, updated emergency response plans. As a result, we found that water systems in the two States we reviewed were unprepared to address emergency situations and did not have effective processes in place to detect and react to unanticipated hazards.

We concluded that it is vital for RUS to assist community water facilities in assessing vulnerabilities, developing effective emergency response plans, and implementing the plans to address the risks associated with a natural or manmade disaster. Without such assistance, the risk of contamination or interruption of the supply of clean drinking water for rural communities is increased.

Recommendations In Brief

We recommend that RUS ensure that vulnerability assessments and emergency response plans are prepared for all RUS funded community water systems. The agency should coordinate the completion of vulnerability assessments and emergency response plans for RUS funded community water systems serving less than 3,300 persons. That coordination should include contacts with Environmental Protection Agency (EPA), State officials of Rural Water Associations, State and local health departments, State and local emergency organizations, regulatory authorities and local government officials. Further, RUS should advise officials at all RUS funded community water systems of the evolving requirements and sources of assistance regarding preparation of vulnerability assessments and emergency response plans.

Agency Responses

RUS reiterated the agency's concern that rural Americans have access to safe and reliable services for electricity, telecommunications, water supplies, and waste treatment. The response stated that it is not surprising that the water systems visited did not have vulnerability assessments and emergency response plans that addressed terrorist activities. RUS cited language exempting systems serving 3,300 or fewer people from legal requirements and noted that vulnerability assessments and emergency response plans are not required to be completed for larger water systems until June 2004 and December 2004, respectively. However, "RUS is interested because a system's ability to recover from any type of disaster is critical to the financial viability of the system and can impact the repayment of RUS loans."

RUS agreed to work with all borrowers, water and wastewater alike, to encourage them to complete vulnerability assessments and emergency response plans. The agency proposes to use technical assistance providers, to include National Rural Water Association (NRWA), Rural Community Assistance Program, and the National Drinking Water Clearinghouse to

provide assistance and tools to accomplish this goal. The agency plans to provide this assistance over the next 3 years.

**OIG
Position**

The RUS response, dated December 23, 2003, is included as Exhibit A of the report. We have incorporated applicable portions of the response along with our position in this section and in the Finding and Recommendations section of the report. In summary, we are in general agreement with the agency's plans to improve the emergency preparedness of RUS borrowers through technical assistance in the completion of vulnerability assessments and emergency response plans. However, we believe that the nature of the conditions we identified as well as the current global environment warrant more prompt action; 3 years is too long a timeframe for providing technical assistance for emergency planning.

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Abbreviations

EPA	Environmental Protection Agency
FY	Fiscal Year
NRWA	National Rural Water Association
OIG	Office of Inspector General
RBS	Rural Business Service
RCAP	Rural Community Assistance Program
RHS	Rural Housing Service
RUS	Rural Utilities Service
USDA	United States Department of Agriculture
WEP	Water and Environmental Programs

Background and Objectives

Background

Rural Development is the credit agency for rural development in the United States, Puerto Rico, the Virgin Islands, and trust territories. Rural Development provides loans and grants and extends loan guarantees for housing, community development, community water systems, and electric and telecommunications programs. Nationwide, Rural Development has an outstanding loan portfolio that exceeds \$70 billion. The programs are delivered through each agency's national office, 47 State offices, and over 800 area and local offices. At the State level, Rural Development provides guidance and oversight of field office activities and administers program activities. The management of the three Rural Development agencies is responsible for establishing internal controls and for ensuring compliance with laws and regulations applicable to its programs.

Following the events of September 11, 2001, the Federal government intensified its efforts to address the potential for deliberate contamination of agriculture products. On October 8, 2001, the President issued an executive order establishing the Office of Homeland Security, which added agriculture to the list of critical infrastructure systems needing protection from terrorist attack. In response to this, the Department formed a Homeland Security Council to develop a Department-wide plan to coordinate efforts of all agencies and offices. Rural Development officials who participated in these activities advised us in the entrance conference that they had concluded that Rural Development programs were not significantly vulnerable and that homeland security issues did not need to be actively addressed. This was based partially upon the fact that these programs serve small communities in rural areas where the population is limited, open space exists, and homeland security related events have not previously occurred.

The mission of the Rural Business Service (RBS) is to enhance the quality of life for rural Americans by providing leadership in building competitive businesses including sustainable cooperatives that can prosper in the global marketplace. The agency serves rural communities with a population of 50,000 or less. RBS National Office officials took a proactive view of the risks associated with potential terrorist activities. Shortly after September 11, 2001, the RBS National Office sent notification letters to each Rural Development State Office mandating a review of business and industrial loans and cooperative services contracts to identify suspicious purposes or activities (e.g., loan for purchase of a crop duster airplane).

The Rural Housing Service (RHS) mission is to help build competitive, vibrant rural communities by providing financing and technical assistance for needed community facilities and housing for very low to moderate-

income families. The agency serves rural populations of up to 50,000. According to the Administrator of RHS, Community Facility Loan Program borrowers such as hospitals and healthcare facilities may have higher vulnerability in the event of a disaster than other types of RHS clients, such as single-family housing borrowers.

A RHS supported mental health counseling service offered crisis counseling and support to emergency medical staff serving at Ground Zero. In the days and weeks that followed September 11th, therapists from the Southern New Jersey facility staffed the grief counseling/crisis hotlines established by the Red Cross and the New Jersey Department of Health and Human Services in Liberty State Park. They also offered crisis counseling training to area clergy, responded to local community requests for support, and served as therapeutic companions to family members coming face to face with their losses at Ground Zero.

We found that an emergency management program that had received support through the community facilities loan program made an important contribution in responding to the terrorist attack on the World Trade Center. A New Jersey Emergency Planning operation that we reviewed sent 17 emergency (ambulance type) vehicles to the Meadowlands staging area by 6 p.m. on September 11th. They provided the vehicles daily through September 18th in 12 to 16 hour shifts.

The mission of the Rural Utilities Service (RUS) is to serve a leading role in improving the quality of life in rural America by administering three basic programs: electric, telecommunications, and water and waste. The agency provides policy, planning, financing and services for utilities serving rural areas. Field representatives and field accountants provide technical assistance to the borrowers.

United States Department of Agriculture 's (USDA) fiscal year (FY) 2004 Annual Performance Plan sets forth the Annual Performance Goal to "Improve the Quality of Life in Rural America." Clean water is an important component of the plan, which states, in part, "Through programs that provide for clean water... USDA can meet the challenges and provide for an improved standard of living in rural America." A key performance indicator, as listed in the FY 2004 Plan is the RUS responsibility to "Provide access for residents to clean drinking water."

In October 1997, RUS contracted with the National Rural Water Association (NRWA) to operate a rural water circuit rider technical assistance program to provide technical assistance in five major areas, to include: operations, treatment, management, potential compliance, and compliance. Although RUS officials advised us that this program was used

as a primary vehicle for providing information about the need for emergency planning, we noted that the contract did not call for specific analyses of disaster planning and recovery at the community water facilities to be assisted. A subsequent \$12 million contract issued in November 2002, called for a similar arrangement, with technical assistance to be provided in the areas of operations and maintenance, treatment, compliance, construction, financial management, general management, and water board training. Like its predecessor, this contract did not include specific provisions for vulnerability assessments or disaster planning technical assistance.

Rural water systems, such as those financed by RUS, have not been the subject of extensive security assessment. According to a member of the President's Commission for Critical Infrastructure Protection, "Most of the larger metropolitan systems have now improved their security... Many smaller systems, believing they would not be targets for terrorists, have still not seriously addressed security matters. Such reasoning is not well-founded." An internationally recognized terrorism expert provides the opinion that "No community is immune. As the major cities harden their targets, a small community may become more interesting to aggressors."

Informed opinion differs as to the likelihood of intentional attack on America's water supply. Most biological warfare agents are intended for aerosol application and are much less effective if diluted in water. Despite this fact, many biological warfare agents can debilitate or even kill a person if consumed. Therefore, according to the National Drinking Water Clearinghouse, biological warfare agents should be considered a threat to drinking water systems and operators should be trained to handle a biological warfare event. Among the agents that can present a threat to the water supply are weaponized anthrax, tularemia, shigellosis, cholera, and salmonella. Anthrax spores are considered stable in water for up to 2 years and are resistant to chlorine. It is considered probable that *C. Perfringens*, an agent that is common in sewage, can be a threat to the water supply; this bacteria is considered resistant to chlorine.

According to the Assistant Administrator for Water and Environmental Programs, RUS does not see itself "on the front lines for ensuring that the water and wastewater systems are safe from terrorist activities." The agency believes that, although RUS water and wastewater system customers may not be at high risk for a terrorist attack, they are much more likely to experience a natural disaster, vandalism, or an accident that would significantly impact the system operation. The Assistant Administrator has stated that RUS does play a strong "supporting role" and is "very interested in coordinating... activities with other agencies when appropriate."

In June 2002, Congress enacted the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (Bioterrorism Act), which amended the Safe Drinking Water Act. The Bioterrorism Act required all medium-sized and large-size community water systems to assess vulnerability to terrorist attack and develop emergency plans to prepare for and respond to such attack.

As of September 30, 2001, the RUS loan portfolio included 5,759 community water systems. The 5,759 borrowers had a total of 12,078 loans with unpaid principal totaling \$4.7 billion.

Objectives

The objective of our audit was to identify, for Rural Development programs, the level of risk associated with a variety of homeland security issues, to include the potential for intentional acts of terrorism and natural disasters.

Finding and Recommendations

Section 1. The Rural Utilities Service (RUS)

Finding 1

Many RUS Community Water System Borrowers Have Not Prepared Emergency Response Plans

RUS runs the risk that water supplies for rural American communities may be interrupted in times of natural disaster or terrorist attack. This risk is increased because the agency has not ensured that RUS borrowers have assessed the vulnerabilities of water systems and prepared effective, updated emergency response plans. As a result, we found that water systems in the two States we reviewed were unprepared to address emergency situations and did not have effective processes in place to detect and react to unanticipated hazards. Additionally, achievement of the Department's performance objective to provide access to clean drinking water may be hampered.

RUS and EPA share the objective of ensuring safe, reliable and affordable drinking water for the residents of rural America.¹ Our review of Public Law 107-188, the Bioterrorism Act of 2002, and Environmental Protection Agency (EPA) guidelines disclosed that EPA maintains responsibility for dealing with vulnerability assessments and emergency response plans for community water systems serving populations greater than 3,300 persons. However, this law does not address how or when the smaller community systems, (those to whom RUS normally provides program funding), are to perform vulnerability assessments and develop emergency response plans. Historically, RUS has not been involved in emergency planning for small water systems. The emergency response plans are designed to identify, by vulnerability: (1) the type of immediate response needed, (2) how to bring the system back into operation, and (3) what remediation action is needed to repair or rebuild the physical structure.

We attempted to corroborate RUS officials' assertion that RUS funded water systems have implemented security plans. We visited 10 water facilities in two States to review their operations and assess the status of the vulnerability assessments and emergency plans. The objectives of our onsite visits were to interview water system officials and assess vulnerability regarding both natural and manmade disasters, with emphasis on manmade risks. We also toured the community water systems and made observations regarding security. We interviewed system officials, and representatives of the Rural Community Assistance Program (RCAP), State Rural Water Associations, and representatives from the State and local Departments of Health.

¹ Memorandum of Agreement Between the United States Environmental Protection Agency and the Rural Utilities Service of the United States Department of Agriculture, dated April 29, 2002, and signed by Hilda Gay Legg, Administrator, RUS and Ann Veneman, the Secretary of Agriculture.

RUS does not have written criteria specifically requiring vulnerability assessments and emergency response plans for the small community water systems it funds. However, RUS officials advised us that they believed that all RUS borrower water facilities have a security plan, an assertion that we later found to be materially incorrect when we attempted confirmation at 10 judgmentally selected water facilities. Agency officials acknowledge the value of vulnerability assessment and planning for its borrowers, to include community water systems serving fewer than 3,300 people.² However, as of March 2003, the agency limited its involvement in disaster planning to informally encouraging small local water systems to take steps considering security as part of project planning and issuing a \$12 million contract to the NRWA to provide technical assistance to the water systems that request such assistance.

Seven of the 10 judgmentally selected water systems we reviewed did not have an emergency response or security plan. Three community water systems we visited had prepared emergency response plans, but each of these lacked critical features necessary to ensure the reliable provision of safe drinking water to its customers in the event of terrorism, vandalism, natural disaster, or nuclear event. RUS officials had incorrectly assumed, without checking, that nearly all facilities had some sort of plan.

Based on our interviews with RUS officials, the agency was not aware of the degree to which its small community water facilities were unprepared to deal with disaster. NRWA's recent proposal for the contract with Rural Development stated, "Immediately after September 11, 2001, circuit riders across the nation worked with systems to review their security and provide information as it became available... The NRWA Security Vulnerability Self-Assessment Guide for Small Water Systems and Emergency Response Plan Template are currently being used during onsite technical assistance and are being provided to rural and small utilities across the nation to enhance the security of the nation's water systems."

Contrary to the assertions in NRWA's recent proposal for the contract with Rural Development, we found that many of the systems we reviewed did not have complete vulnerability assessments and emergency response plans to ensure disaster preparedness. In one State, the five water systems we reviewed had been visited by a circuit rider, but only two had prepared an emergency response plan. Notwithstanding the technical assistance that was to have been provided, the two emergency response plans that were provided were incomplete and did not include procedures to address significant vulnerabilities. For example, the plan developed by a village of 2,250

² The Bioterrorism Preparedness and Response Act of 2002, does not address community water facilities serving populations of fewer than 3,300 people.

residents did not address biological, chemical, or radiological contamination. Further, the plan did not deal with how the utility will handle equipment failure or the loss of life of facility employees. Thus, even though the plan purports to describe “the steps to be taken to minimize the initial impetus of the disaster,” we concluded that plan was not adequate to address potential natural or manmade hazards.

In another State, the situation in the water systems we visited was even more severe. Only one of the five systems visited had prepared any sort of an emergency response or security plan; however, none of the water systems had been contacted by RUS employees to discuss emergency preparedness. We were not provided with any evidence to show that the systems had been visited by a circuit rider to assist with emergency planning.

Although water system officials for a county public service district felt that they had an effective emergency response plan, we noted that the document provided to us by this facility was not a plan at all; instead the document set forth positive actions taken by the water system (e.g., provision of extra police coverage and installing sensors at the tank site) but did not describe any contingency plans in the event of chemical, biological, or radiological contamination.

Our onsite observations confirmed the need for comprehensive vulnerability assessments and the development and implementation of plans to ensure the security of rural water systems. For example, our review of one community water system disclosed that the town’s water supply intake pipe is in an inherently risky location. The plant is not fenced and does not have security lighting. At the time of our review, we observed people kayaking near the intake pipe, a factor that increases the risk of intentional contamination. Because the intake pipe is located in the river near a commercial facility, an accident such as an oil spill by a tanker could render the water unusable. Although the plant has an automatic paging system to advise plant officials at home when monitors indicate a problem, we were advised that this system has never worked since the time it was procured. Thus, incidents that occur at night, when plant operators are routinely absent, will be undetected until the next morning. As additional risk factors, we noted that the unfenced plant was located near a public recreation area and several cars were parked very close to the building.

This town had developed a prioritization of needed actions based on the vulnerability assessment completed in coordination with the NRWA. However, our review of the listing showed that it was incomplete and did not include the specifics necessary to guide effective correction of assessed vulnerabilities. For example, needed actions included steps such as “we need more security” and “new security system” without further elaboration. The

scheduled completion date was shown to be “none” for each item. Thus, we concluded that the vulnerability assessment completed in coordination with the NRWA was not useful and did not lead to security improvements in the case of this particular town. Further, the assessment did not provide the detailed information needed for preparation of an effective and thorough disaster recovery plan.

We observed similar weaknesses in physical security, to include inadequate fencing, limited lighting, and the failure to limit access to authorized individuals, in seven of the ten water systems we reviewed.

We discussed this issue with RUS officials. They acknowledged that it is a good idea to require the vulnerability assessments and emergency response plans for their funded systems. They also explained that, through an existing contract with the NRWA, they could notify the small community water systems of the requirement for these actions. They said the contract already provides for the circuit riders to provide technical assistance in these areas if requested by the system officials.

We are aware that current legal and regulatory guidance does not specifically mandate the preparation of vulnerability assessments and emergency response plans for small water facilities such as those most frequently financed by RUS. During our exit discussions and in followup correspondence, RUS officials repeatedly emphasized the fact that most of the systems we visited were not required to prepare assessments under the Act. However, we believe that it would be prudent for RUS to support development of vulnerability assessments and emergency response plans for all of its water and waste facilities, even if the population served is smaller than the minimum requirements imposed by the Act.

RUS employees have taken some limited action to address the need for additional security at small RUS funded water facilities. For example, the agency contracted with the NRWA to provide 104 circuit riders to provide onsite technical assistance to small water systems. According to information provided at the exit conference, since September 2001, RUS has asked that any emergency planning undertaken by NRWA include securing the system against terrorist threats. However, we noted that the contract with NRWA, issued in November 2002, did not call for specific analysis of disaster planning and recovery at the community water facilities to be assisted. Further, our review of vulnerability assessments, completed in coordination with the NRWA, led us to conclude that the technical support provided by NRWA did not necessarily result in effective planning or necessary security improvements.

The perspective on RUS' relationship to safe and reliable drinking water varies. The RUS mission cannot be achieved in the absence of a safe water supply for rural America. For example, the Department's FY 2004 Annual Performance Plan includes the performance indicator "provide access for residents to clean drinking water" and a recent Memorandum of Understanding between USDA and EPA, signed by the Secretary of Agriculture, stated "RUS and EPA share the objective of ensuring safe, reliable, and affordable drinking water for the residents of rural America."

In contrast, RUS program officials with responsibility for program implementation stated emphatically that RUS Water Environment Program is not in the business of "ensuring safe and reliable water supplies." In answering the question "What is the Rural Utilities Service role in vulnerability assessments and emergency response planning?" The Assistant Administrator for Water and Environmental Planning emphasized financial impacts on USDA, writing "RUS is interested because a system's ability to recover from any type of disaster is critical to the financial viability (emphasis added) of the system and can impact repayment of RUS loans." The Office of Inspector General (OIG) believes that the objective of ensuring safe reliable drinking water is at least as critical to the success of the RUS mission as the objective of ensuring repayment of loans. Because both objectives are important, RUS should work with local water systems to achieve an enhanced level of security so that rural America has safe, reliable drinking water and RUS loans can be repaid.

In responding to our audit results, RUS program managers asserted that they do not have regulatory authority or responsibility for "mandating" that RUS borrowers take steps to secure water supplies. While we agree that RUS may not be able to force a borrower to take prudent actions, if the borrower is adamantly opposed to those actions, we believe that there are important steps that RUS can take to reduce risk from terrorist acts or natural disaster. Additionally, we do not agree that the lack of specific statutory language requiring disaster planning prevents the Agency from supporting its borrowers in achieving a secure system. We note that the agency has frequently executed other "optional" type initiatives, for which it does not have a specific mandate. For example, a review of the RUS Water and Environmental Programs web site displays RUS accomplishments in the areas of conflict resolution and snowmaking. We believe that the need for emergency preparedness on the part of RUS water system borrowers warrants agency attention and effort, even if it is not specifically mandated in statute.

In order to better protect rural Americans, RUS needs to: (1) require its borrowers to develop vulnerability assessments and emergency response plans and to test these plans unless the borrower adamantly opposes planning for emergency preparedness, (2) notify the borrowers of the availability of

assistance available through the circuit rider program and monitor that assistance to ensure quality and effectiveness, and (3) advise the borrowers that program funding could be available to strengthen security.

Recommendation No. 1

Ensure that vulnerability assessments and emergency response plans are prepared for RUS funded community water systems.

Agency Response.

In a December 23, 2003, response to the draft report, RUS responded that it is not within the RUS mission to “ensure” completion of vulnerability assessments and emergency response plans; the agency does not have statutory or regulatory authority. RUS budget makes no provisions for the staffing and administrative expenses to carry out such an effort. Water and Environmental Programs (WEP) will require owners to certify that vulnerability assessments and emergency response plans required by EPA have been completed when providing new loans, grants and guarantees. WEP will encourage existing borrowers to comply with EPA requirements. RUS will work with all borrowers, water and wastewater alike, to encourage them to complete vulnerability assessments and emergency response plans. The agency proposes to use Technical Assistance providers (NRWA, Rural Community Assistance Program (RCAP), National Drinking Water Clearinghouse, etc.) to provide assistance and tools to accomplish this goal.

OIG Position.

The preparation of accurate vulnerability assessments and effective emergency response plans is key to the accomplishment of the objective that RUS shares with EPA, “ensuring safe, reliable, and affordable drinking water for the residents of rural America.” We agree that RUS should work with all borrowers to encourage them to complete vulnerability assessments and emergency response plans and we agree that this assistance could be provided through RUS’ existing technical assistance providers. To reach management decision to this recommendation, please provide the details of how RUS plans to work with all borrowers, to include the date by which this will be accomplished and the management controls to be put in place to ensure that technical assistance results in effective planning and necessary security improvements.

Recommendation No. 2

Coordinate the completion of vulnerability assessments and emergency response plans for RUS funded community water systems serving less than 3,300 persons. Coordination should include contacts with EPA, State officials of Rural Water Associations, State and local health departments, State and local emergency organizations, regulatory authorities and local government officials.

Agency Response.

In the December 23, 2003, response, RUS stated that, although we do not have the statutory or regulatory authority to coordinate the completion of these documents, the agency will assist existing borrowers with the completion of vulnerability assessments and emergency response plans using technical assistance providers. A request for additional expense funds will be prepared by March 1, 2004. Subject to the availability of funds, RUS will work with technical assistance providers to assist borrowers and applicants to complete vulnerability assessments and emergency response plans. With the requested funding, RUS would be able to amend its contract with the NRWA and its agreements with RCAP to stress vulnerability assessments and preparation of emergency response plans. Of the approximately 5,800 water systems, most of which fall below the threshold mandated by the Bioterrorism Act, the agency would propose to target a third each of the next 3 years for working with technical assistance providers to complete vulnerability assessments and emergency response plans. RUS would provide the technical assistance providers a list of borrowers in each State. RUS would require a certification from the provider and borrower that a vulnerability assessment is completed and another when the emergency response plans is completed. The certification would need to certify that all six basic elements identified by EPA have been addressed.

Additionally, RUS is in the process of revising 7 CFR 1780, Water and Waste Loan and Grant Program, regulation. As part of that revision, the agency is proposing to include projects addressing security issues to receive additional priority points in the application selection process.

OIG Position.

We agree that the actions proposed by RUS will improve the preparedness of borrowers to respond to emergency situations. While we agree, in principal, with the planned action, we believe that the nature of the conditions we identified as well as the current global environment warrant more prompt action; 3 years is too long a timeframe for providing technical assistance for emergency planning.

To reach management decision, we need documentation to show a plan for more timely action. Additionally, we need information about the timetable for revision of 7 CFR 1780.

Recommendation No. 3

Send letters to officials at all RUS funded community water systems emphasizing the evolving requirements and sources of assistance regarding preparation of vulnerability assessments and emergency response plans.

Agency Response.

The December 23, 2003, response from RUS stated that this action was completed in May of 2003, before this audit was shared with RUS. The letter was sent to all RUS funded water systems, not just those serving more than 3,300 persons, and to all RUS funded wastewater systems. As stated in the letter, RUS believes that all borrowers should assess their vulnerabilities and prepare an emergency response plan. Subject to funding availability, RUS will amend the contract with the NRWA to develop a mailing notifying all water systems serving populations of less than 10,000 of the services available to them through the NRWA in obtaining assistance in preparing vulnerability assessments and emergency response plans.

OIG Position.

We are aware of the letter sent by the RUS Administrator in May of 2003, and considered its contents during our audit. While the letter represented a positive step, it did not meet the intent of our recommendation, in part because it did not include information to be developed by RUS in responding to Recommendation Nos. 1 and 2 (above). However, we agree with the plan to amend the contract with the NRWA to develop a mailing notifying all water systems serving populations of less than 10,000 of the service available to them through the NRWA in obtaining assistance. To reach management decision on this recommendation, we need documentation of the timeframes for amendment of the NRWA contract, as well as details of how borrowers will be notified of services and tools to be provided by other technical assistance providers, to include RCAP and the National Drinking Water Clearinghouse, as described in the response to Recommendation No. 1.

Recommendation No. 4

For RUS funded borrowers that are opposed to emergency planning, if any, provide technical assistance visits to educate the borrowers on the value of emergency preparedness and develop alternatives in the event of disaster.

Agency Response.

The December 23, 2003 response from RUS stated that, in complying with Recommendation No. 2, this will be provided. Additionally, the technical assistance provider will be asked to advise the State office of these instances, and additional servicing actions in the form of letters, visits, etc., will be used to attempted to convince those individual systems opposed to completing a vulnerability assessment and emergency response plan to reconsider.

OIG Position.

While we agree with the proposed action, we do not agree that a 3-year period, is appropriate. Water systems that oppose emergency planning are among those most likely to be at risk and should receive technical assistance immediately. We can reach management decision on this recommendation when we receive documentation to show more timely action, to include details of the additional servicing actions to be taken by State offices.

Scope and Methodology

The fieldwork was conducted at Rural Development Headquarters, five judgmentally selected State Rural Development offices and at judgmentally selected RHS, RBS, and RUS borrowers and other organizations that had received funding through Rural Development programs. We attempted to confirm the information provided by Rural Development officials about the status of security and emergency response planning by visiting judgmentally selected facilities that had received financial support from Rural Development. We selected the facilities visited to ensure a variety of States and to minimize travel.

We conducted onsite visits to four facilities that had been supported by the RHS community facilities program. We visited a total of five RBS borrower facilities located in three different States. We conducted onsite reviews at five RUS electric facilities, ten community water systems and five telecommunications facilities. Rural Development employees accompanied us on many of our reviews. We also visited the National Drinking Water Clearing House, located in Morgantown, West Virginia. RUS officials have been provided with a listing of the specific sites visited.

Fieldwork was conducted during the period February 2002 through February 2003. We assessed the risks related to: (1) security over the assets used as collateral for each of the selected loans; (2) diversion of loan or grant funds for unauthorized purposes; and (3) unauthorized access that could result in health and safety issues for the general public. We emphasized the evaluation of risks associated with a variety of homeland security issues, to include both the potential for intentional acts of terrorism and natural disasters.

The audit was conducted in accordance with generally accepted government auditing standards.

Exhibit A - Response From Rural Development

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United States
Department of
Agriculture

Rural Development

Operations and
Management

Washington, DC
20250

JAN 08 2004

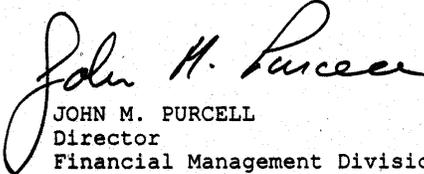
SUBJECT: Office of Inspector General
Rural Development
Homeland Security Issues
(Audit No. 85099-001-HY)

TO: Richard D. Long
Assistant Inspector General
for Audit
Office of Inspector General

Attached for your review is the Rural Utilities Service's response to the official draft for the subject audit.

This response is being submitted for inclusion in the final report and your consideration to reach management decision on the recommendations.

If you have any questions, you may contact La'Shonda DeBrew of my staff at 692-0086.


JOHN M. PURCELL
Director
Financial Management Division

Attachment

Rural Development is an Equal Opportunity Lender. Complaints of discrimination should be sent to: Secretary of Agriculture, Washington, DC 20250





United States Department of Agriculture
Rural Development

Rural Business-Cooperative Service • Rural Housing Service • Rural Utilities Service
Washington, DC 20250

DEC 23 2003

SUBJECT: Office of Inspector General (OIG) – Rural Development Homeland Security
Issues (Audit No. 85099-1-Hy)

TO: John Purcell
Director
Financial Management Division

FROM: GARY J. MORGAN
Assistant Administrator
Water and Environmental Programs
Rural Utilities Service

This is in response to the above described Draft Report from OIG. The Rural Utilities Service (RUS) provides financial assistance to a large percentage of the infrastructure utilities in rural America through the many electric, telecommunications, and water programs. RUS is concerned that rural Americans have access to safe and reliable services for electricity, telecommunications, water supplies, and waste treatment. RUS financial assistance has been helping to develop new rural system and enhance existing systems for more than 60 years. Since the audit recommendations focus on the perceived issues with water systems the remainder of our comments will be limited to the water and waste programs.

RUS Water and Environmental Programs (WEP) has been and continues to be active in enhancing the ability of rural water systems to provide safe, reliable drinking water under any circumstances. WEP has been working with U.S. Environmental Protection Agency (EPA) in implementation of P.L. 107-188. We have attached the following materials as documentation of some of the WEP activities:

- Attachment 1 outlines the primary WEP activities associated with enhancing the safety and reliability of rural water systems.
- Attachment 2 is a copy of the letter Administrator Legg mailed to all water and waste borrowers in May of 2003.
- Attachment 3 is a response to the US EPA OIG on Cross-Agency Water Security Activities.
- Attachment 4 is a copy of the funding request to implement the security enhancements identified by system vulnerability assessments.

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will require owners to certify that VA and ERP required by EPA have been completed when providing new loans, grants and guarantees. WEP will encourage existing borrowers to comply with the EPA requirements. RUS will work with all borrowers, water and wastewater alike, to encourage them to complete VA and ERP. We propose to use our Technical Assistance providers (NRWA, Rural Community Assistance Program (RCAP), National Drinking Water Clearinghouse, etc.) to provide assistance and tools to accomplish this goal.

Recommendation 2: Although we do not have the statutory or regulatory authority to coordinate the completion of these documents, we will assist existing borrowers with the completion of VA and ERP using technical assistance providers. A request for additional expense funds will be prepared by March 1, 2004. Subject to the availability of funds, RUS will work with our technical assistance providers to assist borrowers and applicants complete VA and ERP. With the requested funding, RUS would be able to amend its contract with the NRWA and its agreements with RCAP to stress VA and preparation of ERP. Of the approximately 5,800 water systems, most of which fall below the threshold mandated by the Bioterrorism Act, we would propose to target a third each of the next 3 years for working with our TAT providers to complete VA and ERP. RUS would provide the technical assistance providers a list of borrowers in each state. RUS would require a certification from the provider and borrower that a VA is completed and another when the ERP is completed. The certification would need to certify that all six basic elements identified by EPA have been addressed..

Additionally, RUS is in the process of revising 7 CFR 1780, Water and Waste Loan and Grant Program, regulation. As part of that revision, we are proposing to include projects addressing security issues to receive additional priority points in the application selection process.

Recommendation 3: This action was completed in May of 2003 before this audit was shared with RUS (see attachment 2). The letter was sent to all RUS funded water systems, not just those serving more than 3,300 persons, and to all RUS funded wastewater systems. As stated in the letter, RUS believes that all borrowers should assess their vulnerabilities and prepare an emergency response plan. Subject to the availability of additional expenses funds, RUS will amend the contract with the NRWA to develop a mailing notifying all water systems serving populations of less than 10,000 of the service available to them through the NRWA in obtaining assistance in preparing VA and ERP..

Recommendation 4: In complying with Recommendation 2, this will be provided. Additionally, the TAT provider will be asked to advise our State Office of these instances, and additional servicing actions in the form of letters, visits, etc. will be used to attempt to convince those individual systems opposed to completing a VA and ERP to reconsider.

We appreciate the opportunity to comment on the draft audit. RUS was supportive of the audit. At the opening conference the RUS Administrator pledged full agency support in conducting the audit and expressed an interest in the findings to determine potential program improvements. The report does not mention the high level of agency cooperation during the planning and field visits, but implies the agency feels that all systems are prepared. Additionally, the report states that "RUS runs the risk that the water supply for rural America will be interrupted in times of natural disaster or terrorist attack." This is certainly an over statement of the facts considering the breadth and width of this country. While it is true, one or more systems could be impacted by a natural disaster or terrorist attack, to state that "the water supply for rural America" is at risk appears to be an overstatement.

It is not surprising that the water systems visited did not have vulnerability assessments and emergency response plans that addressed terrorist activities. Systems that serve more than 3,300 and fewer than 50,000 people are not required to complete vulnerability assessments (VA) and submit them to EPA until June of 2004. Emergency response plans (ERP) are not required until six months later. Furthermore, there is not a requirement under P.L. 188-107 for systems serving 3,300 or fewer people to prepare VA or ERP. However, we believe it is important that all water and wastewater borrowers conduct VA or ERP (see Administrator's letter to all borrowers). EPA has had draft guidance for these systems out for public comment. WEP commented on the guidance documents before EPA released the materials. RUS is interested because a system's ability to recover from any type of disaster is critical to the financial viability of the system and can impact repayment of RUS loans. At the time of loan and grant processing RUS will be checking to see if the system is in compliance with EPA and State drinking water requirements. This impacts systems serving over 3,300 people, as these are the only systems covered by P.L. 188-107 and as such, the only systems to be required by EPA to have VA or ERP. We will encourage, and provide information on sources available for assistance in completing VA or ERP. These sources are the RUS technical assistance providers.

After June, 2004, RUS will require systems serving over 3,300 persons to have VA and ERP in place as required by P.L. 188-107. This will be part of the requirement that they must comply with all EPA and State requirements.

National Rural Water Association (NRWA) is a primary technical assistance provider to water systems on operations and management issues. NRWA in cooperation with Association of State Drinking Water Administrators prepared a guide for small systems to use in conducting vulnerability assessments. NRWA also prepared a template for emergency response plans. On August 15, 2003, NRWA released its new software program that is based on the Security Vulnerability Self-Assessment Guide for Small Systems. The new software will automatically generate a VA and ERP.

Recommendation 1: It is not within the RUS mission to "ensure" completion of VA and ERP; the agency does not have statutory or regulatory authority. Our budget makes no provisions for the staffing and administrative expenses to carry out such an effort. WEP

ATTACHMENT 1
Rural Utilities Service
Water and Environmental Programs
August 19, 2003

What is RUS/WEP doing to make small water systems safe?

WEP provides financial support to the National Drinking Water Clearinghouse headquartered at the West Virginia University. Small water systems and consulting engineers recognize the Clearinghouse as a resource for information on small systems. Since last September, the clearinghouse, using RUS funding, has done the following to provide support and guidance on water system security:

- The Winter 2002 issue of *On Tap*, is dedicated to evaluating and protecting water systems from terrorist events. There are articles on Crisis Communications, Polishing Security Plans, Potential for Biological Treats, etc. There is also a special tear out section Checklist Vulnerability Guide.
- A training course has been developed to help systems evaluate and enhance their security measures against potential threats.
- Extensive security information has been added to the NDWC web site (www.nesc.wvu.edu/ndwc/ndwc_protect.htm)

WEP contracts with the National Rural Water Association (NRWA) to provide 104 Circuit Riders. The Circuit Riders provide onsite technical assistance to small water systems. Part of that technical assistance is to help small water systems assess their emergency preparedness. Since last September 2001, WEP has asked that any emergency planning include securing the system against terrorist threats. NRWA and the Association of State Drinking Water Administrators jointly developed a Security Vulnerability Self-Assessment Guide for Small Drinking Water Systems. NRWA also developed a Rural & Small Water and Wastewater System Emergency Response Plan Template.

WEP maintains contact with U.S. EPA Office of Drinking Water and Groundwater and their security team. WEP has participated in several security working group meetings. WEP commented on the US EPA draft guidance documents before US EPA released the materials.

One of WEP's program delivery strengths is the knowledgeable staff members in the field offices that work with small community leaders to help solve their problems. WEP keeps these staff members informed of emergency preparedness issues, such as system security, and resources to assist small systems. Information has been made available to agency staff via teleconferences, Agency Intranet, and training sessions. The National Rural Utilities Service Conference in July of 2002 and the Rural Development State Engineer and Architect Conference in September 2002 both had special sessions devoted to Homeland Security.

WEP has reminded the all of the State Program Directors that investments in water system security that are modest in design, size and cost are eligible project costs and should be considered for funding along with all other system improvements.

ATTACHMENT 2

April 9, 2003

SUBJECT: Securing Water and Wastewater Infrastructure**TO:** All Rural Utilities Service Water and Environmental Programs' Borrowers

A safe, reliable source of water and the proper treatment of wastewater are essential for life and a healthy lifestyle. As a water or wastewater system owner, you work on a daily basis to provide your customers superior service and improve their quality of life. You are to be commended for accepting this responsibility and performing so admirably.

Many things have changed since the terrorist attacks of 2001. We all realize that the infrastructure services that you provide are critical for rural America. Water and wastewater systems must be prepared to deal with natural disasters and accidents that may interrupt service. When President Bush raised the terrorist threat assessment level to "orange" or high risk at the start of the war in Iraq, it prompted me to consider what Rural Utilities Service (RUS) is doing to help. I realize only you can enhance the security of your water or wastewater system, but there are many sources of guidance and assistance available that can make you and your community more successful. You may be aware of most of the following resources but if you are not, I suggest you consider utilizing some of them.

US EPA is implementing the Bioterrorism Preparedness and Response Act of 2002. The Act requires each system serving more than 3,300 people to conduct a Vulnerability Assessment and prepare an Emergency Response Plan. EPA has developed several tools to help systems. I believe it is beneficial for systems of all sizes to review their system vulnerabilities and to develop a plan for dealing with emergencies. The Act also requires the establishment of a information network for housing and sharing secure information among water and wastewater systems. WaterISAC is that network. This network issues alerts and information on security events relating to water and wastewater systems that is not available from any other source. For example, EPA recently issued two documents for the water sector that are available thorough WaterISAC: *Guarding Against Terrorist and Security Threats: Suggested Measures for Water Utilities*; and *Joint Advisory for Centers of Disease Control and Prevention and EPA*. If your system has not already become a subscriber of the network, I urge your system to do so. WaterISAC can be contacted on the World Wide Web at www.waterisac.org or by phone at (202) 758-1845.

2

The **National Rural Water Association (NRWA)** has guidelines and templates for the vulnerability assessments and emergency response plans. The **NRWA Circuit Rider Program**, partially funded by RUS, can provide on-site assistance for conducting assessments and preparing plans. NRWA is on the web at www.nrwa.org or can be contacted by phone at (580) 252-0629.

The **National Drinking Water Clearinghouse**, also funded by RUS, has guidelines and reference materials available for conducting assessments and preparing plans. The clearinghouse can be reached at www.nesc.wvu.edu/ndwc/ndwc_index.htm or (800) 624-8301.

And last but far from least, enhancing system security is an eligible purpose for financial assistance under the **RUS Water and Environmental Programs**. For RUS assistance contact the nearest Rural Development office in your state.

America's infrastructure security begins with you and we stand with you as you make your system an integral part of our country's strength.

Hilda Gay Legg

Hilda Gay Legg
Administrator
Rural Utilities Service

ATTACHMENT 3

SUBJECT: Cross-Agency Water Security Activities

TO: JIM LEGG
Office of Inspector General

FROM: GARY J. MORGAN /s/ Gary Morgan 3/20/03
Assistant Administrator
Water and Environmental Programs
Rural Utilities Service

This is Rural Utilities Service Water and Environmental Programs (WEP) response to an undated memorandum on this subject from Nikki Tinsley of the US EPA Inspector General's office. WEP provides financial assistance in the form of loans, grants, and loan guarantees to rural water and wastewater systems that serve rural areas and communities of less than 10,000 population. Since we do not own or regulate these water or wastewater systems, we do not see ourselves on the front lines for ensuring that the water and wastewater systems are safe from terrorist activities. However, we believe that WEP plays a strong supporting role and is very interested in coordinating our activities with other agencies when appropriate.

WEP believes that although our water and wastewater system customers may not be at high risk for a terrorist attack, they are much more likely to experience a natural disaster, vandalism, or an accident that would significantly impact the system operation. Therefore, each of these systems should conduct a vulnerability assessment and prepare an emergency response plan regardless of the level of terrorist threat.

WEP does not fund research and development activities. Our response to the questions in the memorandum will be limited to the other activities WEP has conducted or are underway related to enhancing the security of water and wastewater systems.

What activities and research and development has your agency undertaken relating to water security?

One of WEP's program delivery strengths is the knowledgeable staff members in the field offices that work with small community leaders to help solve their problems. WEP keeps these staff members informed of emergency preparedness issues, such as system security, and resources to assist small systems. Information has been made available to agency staff via teleconferences, Agency Intranet, and training sessions.

WEP has directed field staff to check progress on completing the vulnerability assessment and emergency response plan as part of processing a system's application for financial assistance.

WEP has reminded all of the State Program Directors that investments in water system security that are modest in design, size and cost are eligible project costs and should be considered for funding along with all other system improvements.

WEP contracts with the National Rural Water Association (NRWA) to provide 104 Circuit Riders. The Circuit Riders provide onsite technical assistance to small water systems. Part of that technical assistance is to help small water systems assess their emergency preparedness. WEP has asked that any emergency planning include securing the system against terrorist threats. The NRWA has developed a Rural Water and Wastewater Security Self-Assessment guide and an Emergency Response Plan Template for use by small systems.

WEP provides funding for the National Drinking Water Clearinghouse headquartered at the West Virginia University. Small water systems and consulting engineers recognize the Clearinghouse as a resource for information on small systems. The clearinghouse, using WEP funding, has done the following to provide support and guidance on water system security:

- The Winter 2002 issue of On Tap, is dedicated to evaluating and protecting water systems from terrorist events. There are articles on Crisis Communications, Polishing Security Plans, Potential for Biological Treats, etc. There is also a special tear out section Checklist Vulnerability Guide.
- A training course has been developed to help systems evaluate and enhance their security measures against potential threats.
- Extensive security information has been added to the NDWC web site (www.nesc.wvu.edu/ndwc/ndwc_index.htm#protection)

In what areas does your agency partner with EPA to address water infrastructure threats, vulnerabilities, and research/technology needs?

WEP maintains contact with U.S. EPA Office of Drinking Water and Groundwater and their security team. WEP has participated in several security working group meetings and commented on policy documents when requested.

How is your agency coordinating its water security activities, research, and funding needs with EPA and other federal agencies?

WEP maintains contact with U.S. EPA Office of Drinking Water and Groundwater and their security team. WEP has participated in several security working group meetings and commented on policy documents when requested.

Most WEP Program Directors in the Rural Development State Offices compare and coordinate funding applications on a monthly or quarterly basis with the State Drinking Water and Clean Water Revolving Fund programs and other federal agencies.

How much fiscal 2003 funding has your agency devoted to water security activities?

WEP has not set aside a specific amount of financial assistance for water security activities. Normally, the water and wastewater system security enhancements are funded as part of a larger project of general improvements for the entire system.

How has the development of the Department of Homeland Security changed your agency's water security and research responsibilities?

To this point there has been no change.

If we can be of any assistance in describing our programs or activities, please contact me at 202-690-2670.

ATTACHMENT 4



United States Department of Agriculture
Rural Development

Rural Business-Cooperative Service • Rural Housing Service • Rural Utilities Service
Washington, DC 20250

January 8, 2002

SUBJECT: Proposal for Additional Funding
Security of Water and Wastewater Facilities

TO: Hilda Gay Legg
Administrator

FROM: Gary J. Morgan */s/ Gary J. Morgan*
Assistant Administrator
Water and Environmental Programs

Proposal

RUS Water and Environmental Programs (WEP) request and additional \$35 million in FY 2002 for security improvements grants for water and waste projects.

Background:

RUS/WEP can easily determine the average amount of funding provided for all the projects financed in a given year, but it is important to note there are no typical projects. Therefore, these estimates of funding that may be associated with system security are not available in any agency tracking system. The cost estimates herein are educated guesses based on the staff's knowledge of the type and variety of projects funded and the possible security enhancements that could be added to projects. RUS/WEP typically funds 1,000 projects per year for approximately \$1.5 billion.

Vulnerabilities:

Systems are vulnerable to three main types of problems. 1) Damage to physical facilities. This could result from terrorist bomb or vandalism, but more likely from natural disasters such as tornado, flood, etc. 2) Biological or chemical contamination of water supply. 3) Loss of critical service such as electrical power, telecommunications, or treatment chemicals.

Each of these types of problems can have significant impacts on the customers (drinking water) or the environment (untreated wastewater). Each of these types of

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problems can be reduced with additional initial investment at the project development stage. These problems and enhancements are not independent of one another. For example, if access to the facility is limited, it reduces vandalism and the opportunity for someone to contaminate the water. The following is a discussion of the possible security enhancements for each type of problem and associated cost estimates for adding those enhancements.

Damage to Physical Facilities: This risk can be reduced by limiting access to facilities and by stocking critical system components. Fencing, security locks, ID card systems at well fields, treatment facilities, tanks, pump stations, etc. will make unauthorized access more difficult. Some fencing has been done in the past, but fencing to keep out intruders is more expensive than most systems have been installing. Because utility systems are disbursed over large distances, improved security at unstaffed facilities would dictate installation of remote monitoring devices like video cameras at critical facilities and intrusion sensors on tank ladders, pump station doors, etc. These monitoring devices would likely have to display status in more than one location, because small systems are not staffed 24/7 (i.e. both system office and sheriff's office). This monitoring could be combined with SCADA, if the system already has that capability. Maintaining a spare motor and pump with temporary controls for the main pump station would reduce the time required to get the system back on line in the event of damage to that main pump station. Loss of accounting and billing records (electronic data) would be an inconvenience for a system to overcome, but with proper backup procedures it should not require additional system expense. Depending on the type of system being funded (reservoir or wells, number of pump stations, number of tanks, miles of line, complexity of control systems, etc.) the cost per project to enhance security to prevent damage to facilities could vary from \$20,000 to \$500,000. An estimated cost for a \$1 million project is \$25,000.

Biological or Chemical Contamination: This risk would be reduced by implementing the physical facility security enhancements discussed above. However, this risk does not require physical entry to the property, because the attack could be from someone remotely assuming control of the computer-managed treatment process. Security to minimize this risk could be provided by additional fencing around water supplies, monitoring of potential points of access to introduce contamination, additional capability to monitor water quality, and securing computer control systems. Every fire hydrant is a potential point to introduce a contaminate into the system. Securing all fire hydrants on a system is a new problem for water systems. The water industry will likely redesign the fire hydrant to enhance the security of the hydrants. Such changes will likely increase the initial cost of the hydrant by a few dollars, but replacement of upgrading existing hydrants could cost \$1000 each. Traditionally systems have not been routinely monitored for some of the potential terrorist weapons. Developing this sampling capacity will mean the system must invest in additional laboratory space and equipment, or contract out the service. To minimize this risk, the system will be required to sample more frequently and to sample at more locations. Additional computer intrusion prevention should be required when the treatment process will be computer controlled, and almost all systems have some computer-managed treatment

processes. Costs to reduce this risk are difficult to estimate, but could range from \$5,000 to \$500,000. An estimated cost for a \$1 million dollar project is \$10,000.

Loss of Critical Service, such as Electrical Power, Telecommunications, or Treatment Chemicals: Wastewater systems have traditionally provided standby power units at pump stations and treatment plants to prevent untreated discharges during power outages. Water systems have relied on the system storage to provide service during power outages. Most water systems have only enough storage to cover power outages for a few hours and would not be able to sustain service if the power were out for several days. As telecommunications have improved, just like in other industries, water and wastewater systems have become more dependent on electronic transactions to manage the operation of the system and provide just in time service. For example, storage facilities for water or treatment chemicals cost money; however, with better communications and thus faster delivery, the amount of storage facilities (backup or reserve) being included in the system design has been decreasing. Again, the cost of reducing this type of risk varies significantly depending on the specific system components. An estimated cost for a \$1 million dollar project is \$15,000.

Estimate of Need:

The estimate of funds needed for RUS Water and Environmental Programs is based on the following assumptions:

- \$50,000 per project would be needed for security improvements
 - \$25,000 for Physical security
 - \$10,000 for Biological/chemical security
 - \$10,000 for Emergency backup
- RUS funds approximately 1000 water and waste disposal projects a year
- RUS has approximately 8000 active borrowers
- 70% of RUS borrowers receive grant funds

Funds needed for new projects within the next 12 months:

$$1000 \text{ new projects} \times \$50,000 \text{ per project} \times 70\% = \$35,000,000$$

Funds needed to assist existing borrowers with improvements:

$$(8000 \text{ borrowers} \times \$50,000 \text{ per borrower} \times 70\%) / 3 \text{ years} = \$93,333,333$$

Summary:

RUS funds approximately 1,000 water and waste disposal projects in a year for a total of \$1.5 billion. Each of these projects has security needs that will increase the cost of the improvements. Within the next 12 months, we estimate that increased cost will be \$35 million. In addition, there are approximately 8,000 current RUS borrowers. Of those, approximately 5,600 or 70% will require grant assistance. This would take \$93 million each year for 3 years.

Informational copies of this report have been distributed to:

Administrator, RBS

THROUGH: Agency Liaison Officer (4)

Administrator, RHS

THROUGH: Agency Liaison Officer (4)

Administrator, RUS

THROUGH: Agency Liaison Officer (4)

Office of the Chief Financial Officer

Director, Planning and Accountability Division (1)

General Accounting Office (1)