



OFFICE OF INSPECTOR GENERAL

*Catalyst for Improving the Environment*

## **Audit Report**

# **Region 10's Grant for Alaska Village Safe Water Program Did Not Meet EPA Guidelines**

**Report No. 2005-P-00015**

**June 16, 2005**

**Report Contributors:**

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# At a Glance

*Catalyst for Improving the Environment*

## Why We Did This Review

As a followup to a prior audit on the Alaska Village Safe Water Program, we sought to answer the following question: Did Environmental Protection Agency (EPA) Region 10 meet EPA guidelines before awarding the program grant of \$34 million in 2004?

## Background

In 1996, Congress amended Section 303 of the Safe Drinking Water Act to authorize grants to fund mostly infrastructure under Alaska's Village Safe Water Program. Prior to August 2004, Region 10 had awarded \$232 million to Alaska to fund the Village Safe Water Program. On August 18, 2004, the Region awarded an additional \$34 million.

For further information, contact our Office of Congressional and Public Liaison at (202) 566-2391.

To view the full report, click on the following link:

[www.epa.gov/oig/reports/2005/20050616-2005-P-00015.pdf](http://www.epa.gov/oig/reports/2005/20050616-2005-P-00015.pdf)

## **Region 10's Grant for Alaska Village Safe Water Program Did Not Meet EPA Guidelines**

### **What We Found**

Region 10 did not meet EPA guidelines before awarding the Village Safe Water Program grant to the State of Alaska Department of Environmental Conservation. The Region did not ensure that specific environmental objectives and the scope of the work were clear, or assess whether there was a reasonable chance that overall environmental objectives could be achieved.

Further, the Region did not complete the cost review of the individual projects until 3 months after awarding the grant. After the grant award, the Region recommended eliminating six ineligible projects valued at almost \$4.8 million, so the Region needs to amend the grant to exclude the ineligible projects. Timely cost reviews could have prevented inclusion of these ineligible projects.

The Region needs to modify the grant to remove approval for advance draws that are contrary to Federal cash management requirements. Also, the Region needs to document the cost review of \$1.6 million in administrative costs, and clarify the period they cover. While the grant has project and budget periods of 5 years, the Region stated that the administrative costs only covered a 1-year period. The Region needs to clarify this matter to ensure sufficient administrative support for the entire 5-year budget period and compliance with Congressional limitations.

The conditions noted occurred even though Region 10 was aware of the findings and recommendations in our previous report that identified improvements were needed in the award and oversight of Village Safe Water Program grants. The Region stated that it made the 2004 grant award because of financial concerns over the State's program. However, without performing the necessary steps, there were no assurances that the proposed projects met technical and programmatic guidelines and achieved maximum value.

### **What We Recommend**

We recommend that Region 10 suspend work under the grant until all pre-award steps are completed, and establish controls to ensure that Region 10 fulfills all EPA requirements before awarding grants. The Region believed that it had already taken the action needed to fulfill all pre-award steps and that it was unnecessary to suspend the grant.

Based on the Region's response to the draft report, we revised our recommendations to have Region 10 assure that the State's accounting of administrative costs meet regulatory and statutory requirements. We also recommend that Region 10 place the State on a reimbursement payment basis until compliance with cash management requirements are verified.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
INSPECTOR GENERAL

June 16, 2005

**MEMORANDUM**

SUBJECT: Region 10's Grant for Alaska Village Safe Water Program  
Did Not Meet EPA Guidelines  
Report No. 2005-P-00015

FROM: /s/ *Michael A. Rickey*  
Michael A. Rickey  
Director of Assistance Agreement Audits

TO: Ron Kreizenbeck  
Acting Regional Administrator  
EPA Region 10

This is our final report on the subject audit conducted by the Office of Inspector General (OIG) of the U.S. Environmental Protection Agency (EPA). This report contains findings that describe problems the OIG has identified and corrective actions the OIG recommends. We discussed our findings with your staff and issued a draft report. We have summarized your comments in this final report and included your complete response in Appendix A. This report represents the opinion of the OIG and the findings do not necessarily represent the final EPA position. Final determinations on matters in this report will be made by EPA managers in accordance with established audit resolution procedures.

**Action Required**

In accordance with EPA Manual 2750, you are required to provide a written response to this report within 90 calendar days of the date of this report. Please e-mail an electronic version of your response to [adachi.robert@epamail.epa.gov](mailto:adachi.robert@epamail.epa.gov). You should include a corrective actions plan for agreed upon actions, including milestone dates. We have no objections to the further release of this report to the public. For your convenience, this report will be available at <http://www.epa.gov/oig>.

We want to express our appreciation for the cooperation and support from your staff during this audit. If you or your staff have any questions about this report, please contact me at (312) 886-3037, or Robert Adachi, Assignment Manager, at (415) 947-4537.

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## Purpose of Audit

The audit objective was to answer the following question: Did Environmental Protection Agency (EPA) Region 10 (Region) meet EPA guidelines in awarding the Village Safe Water Program grant in 2004 to the Alaska Department of Environmental Conservation (State)?

## Background

The State of Alaska recognized the need for adequate water and sewer systems through the passage of the Village Safe Water Act in 1970. The State of Alaska established the Village Safe Water Program to “establish a program designed to provide safe water and hygienic disposal facilities in the state.” The program is funded from three primary sources: grants from EPA, grants from the U.S. Department of Agriculture, and funds from the State of Alaska.

In 1996, Congress amended Section 303 of the Safe Drinking Water Act to authorize grants to the State of Alaska for the benefit of rural and Native villages for: (1) the development and construction of public water systems and wastewater systems to improve the health and sanitation conditions in the villages; and (2) training, technical assistance, and educational programs relating to the operation and maintenance of sanitation services in rural Native villages. For the State fiscal year ending June 30, 2005, the Village Safe Water Program has a budget of \$78 million, of which: EPA is providing \$32 million, U.S. Department of Agriculture \$26 million, and the State of Alaska \$20 million. From March 1995 through July 2004, EPA had provided \$232 million to the State of Alaska to fund the Village Safe Water Program.

On August 18, 2004, the Region awarded Grant No. XP-970847-01 (grant) to the State for the Village Safe Water Program for the 5-year period June 30, 2004, through June 29, 2009. The grant provided \$34,555,300 as the Federal share of total costs, as shown in the table below:

<b>Object Class Category</b>	<b>Total Costs</b>	<b>Federal Share</b>
Administrative Costs		
Personnel	\$ 1,213,377	\$ 910,033
Travel	180,000	135,000
Equipment	15,400	11,550
Supplies	14,500	10,875
Contractual	285,100	213,800
Indirect	<u>417,523</u>	<u>313,142</u>
Subtotal Administrative Costs	\$ 2,125,900	\$ 1,594,400
Other-Construction Projects	<u>43,948,300</u>	<u>32,960,900</u>
<b>Total</b>	<b>\$46,074,200</b>	<b>\$34,555,300</b>

Approximately \$6,911,060 ( $\$34,555,300 \div 5$  years) went toward the \$32 million of EPA funds included in the \$78 million budget for the fiscal year ending June 30, 2005. The balance of the EPA funds were from grants awarded in prior years.

## Region 10 Did Not Comply With EPA Guidelines

Region 10 did not meet EPA guidelines in awarding the grant for the Alaska Village Safe Water Program. In particular, the Region did not ensure that the grant application contained environmental or public health objectives for the various projects to be funded, or provided sufficient information about particular projects being constructed. In addition, the Region's review of the application prior to awarding the grant did not assess whether there was a reasonable chance that each project funded would achieve its objective(s), and whether costs were reasonable. As a result, there are no assurances that the grant money will be used efficiently and effectively. Also, the grant includes ineligible projects, unauthorized cash management terms, and ambiguous terms. We had reported most of these same conditions to Region 10 in the draft of a prior report issued on July 21, 2004,<sup>1</sup> almost a month before the Region awarded the new grant to the State. However, Region 10 officials stated they did not want to delay the award of the new grant because of concerns about State employees being dependent upon the Federal funds for salaries, and the potential for delays to ongoing projects.

### ***Grant Application Did Not Include Objectives***

Before awarding the grant, the Region was required to determine whether the State would be successful in meeting proposed environmental or public health objectives. To make this determination, the grant application must clearly define the scope of work and the expected environmental and/or public health objectives. EPA Office of Water guidance, *Award of Grants and Cooperative Agreements for the Special Projects and Programs Authorized by the Agency's FY 2004 Appropriations Act*, and the Project Officer Training Manual, state that the Project Officer must ensure that:

- The scope of work is clearly defined.
- The environmental or public health objectives are clearly stated.
- The project has a reasonable chance of achieving its objectives.

The grant application did not include environmental or public health objectives for projects. Therefore, Region 10 was unable to assess the likelihood that a project would achieve its objectives. In most instances, the grant application listed the projects or segments to be constructed without any mention of the environmental or public health objectives. In some instances, the application did not clearly define exactly what would be constructed. For example, the project for the City of Chuathbaluk (EPA funding of \$1,875,000) was described as *Sanitation Improvements Phase 3* with an "environmental health objective/outcome":

*Provide: onsite sewage system for 15 homes currently self-hauling water and using honeybuckets; school sewage system and water service; water well development; water treatment system; and water treatment plant. This project phase will provide only a*

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<sup>1</sup> The final, Report No. 2004-P-00029, *EPA Oversight for the Alaska Village Safe Water Program Needs Improvement*, was issued on September 21, 2004.

*portion of the funds needed to meet the sanitation needs of the community. Additional funds will be needed in the future to fully fund the entire project.*

The information in the grant application was insufficient. First, the description did not clearly describe the infrastructure that would be built with current funds. Secondly, building infrastructure is not an environmental outcome. There was no mention of the environmental objective that would be achieved by constructing the Chuathbaluk project. As a result, there was no assurance that the project would achieve environmental benefits.

### **Cost Review Was Not Timely or Adequate**

The Region did not complete a cost review on the individual projects included in the grant until 3 months after awarding the grant. Following this review, the Region recommended eliminating six ineligible projects valued at \$4,759,500. As a result, the current authorized scope of work includes ineligible projects, and the Region will need to amend the grant to eliminate these ineligible projects.

EPA's Cost Review Guidance (Grants Policy Issuance 00-5), dated June 7, 2000, states:

*It is EPA policy that a cost review be conducted for every project selected for funding. Details regarding the reviews conducted should be documented, regardless of the complexity and depth of the review.*

In the funding recommendation, dated August 10, 2004, the Project Officer stated that:

*The cost review has been completed only for the Administrative costs portion of the grant application. The project tasks have not yet received a cost review. This will be done at a later date prior to awarding the funds for the project portion of the grant application.*

In subsequent correspondence, the Project Officer wrote that the State's application did not provide sufficient information to conduct a proper cost review. Nevertheless, on August 18, 2004, Region 10 awarded the entire \$34,555,300 requested by the State in its application. On November 29, 2004, the Project Officer completed a cost review and recommended that six projects totaling \$4,759,500 be eliminated, and Region 10 will need to amend the grant to exclude these projects.

Further, for the administrative cost reviews that the Region indicated it had conducted prior to contract award, the Region was not able to provide support for its review of the nearly \$1.6 million in such costs, as required. The Region's Grants Management Office performed two application reviews and completed checklists that stated that "there is sufficient supporting detail" for administrative costs. However, there are discrepancies between this claim of sufficiency and application information. For example:

- Personnel were included in a series of tables in the grant application that did not list salaries or any explanation of how salaries would be computed.



- The grant application checklist certified that fringe benefits were included, yet the grant award listed fringe benefits as zero dollars.

Also, Region personnel claimed that categorical cost estimates for administrative expenses in the grant application could be accurately assessed for validity based on previous years' expenses. However, Region personnel admitted no administrative expense reports had been submitted for the past 3 years. Without such reports, it is difficult to determine how an accurate and reliable evaluation based on previous years' contractual and travel expenses could have been made.

In response to the draft report, the Region stated that it completed a second detailed cost review after the grant was issued. As discussed in Appendix A, the second review does not meet the requirements of Grants Policy Issuance 00-5.

### ***Unauthorized Cash Management Terms Were in Grant***

The grant award document includes terms that incorrectly authorize the State to draw cash far in advance of actual need. This practice is not permitted by Federal regulation. The "Forecast of Federal Cash Needs" schedule included in the grant award document showed that the entire Federal award of \$34,555,300 would be needed by June 30, 2006, even though the authorized grant project and budget periods went to June 30, 2009. Many of the projects being funded under the grant are not scheduled to be completed until after June 30, 2006. For example, for the Stebbins project, which requires \$2.5 million (\$1,875,000 Federal share and \$625,000 State share), the "Forecast of Federal Cash Needs" shows a funding request of \$281,250 by September 30, 2005, and a second funding request for the remaining \$1,593,750 by June 30, 2006. However, construction was not even scheduled to start until June 2006, and is scheduled to end in November 2007. These schedules clearly show that the State plans to draw all of the Federal funds at about the time construction begins. This seems to contradict U.S. Treasury and EPA regulations that limit cash draws under grants to immediate need.

U.S. Treasury Regulations, 31 Code of Federal Regulations (CFR) Part 205, require a State to minimize the time between the draw of Federal funds from the Federal Government and their disbursement for Federal program purposes. A Federal program agency must limit a funds transfer to a State to the minimum amounts needed by the State, and must time the disbursement to be in accord with the actual, immediate cash requirements of the State in carrying out a Federal assistance program or project. These U.S. Treasury Regulations are supported further by EPA's regulations at 40 CFR 31.20 and 31.21.

The State's cash management problem was previously reported in Report No. 2004-P-00029 issued on September 21, 2004. In that report, we identified a \$13,168,777 unauthorized cash balance related to the Village Safe Water Program. In response to the finding, the Region stated that it had notified the State that it must discontinue drawing construction funds in advance and follow all U.S. Treasury cash management requirements. Nevertheless, the Region awarded a grant with terms that permit the State to draw funds significantly in advance of needs, and directly contradicts EPA and U.S. Treasury Regulations.

### ***Authorized Period for Administrative Costs Unclear***

The Region stated that the administrative costs of nearly \$1.6 million were for a 1-year period ending June 29, 2005. The grant award document authorized project and budget periods for a 5-year period ending June 29, 2009. However, according to the “Forecast of Federal Cash Needs” included in the award document, all administrative costs would be drawn in the first year. The inconsistency in the grant document creates confusion. Drawing all administrative costs in the first year may conflict with U.S. Treasury and EPA requirements for cash management. Moreover, drawing all administrative funds in the first year raises questions about the cost for grant management in future years, and the mandated limit on administrative costs.

Under the *Award of Grants and Cooperative Agreements for the Special Projects and Programs Authorized by the Agency’s FY 2004 Appropriations Act*, the State may use up to 5 percent of the grant for administrative expenses. According to the grant award, Region 10 authorized \$1,594,400 (see table on page 1 for details) to cover administrative costs for the 5-year period, June 30, 2004, through June 29, 2009. These administrative costs are about 4.6 percent of the total grant award and are within the mandated limitation. Based on a 5-year budget period, the estimated administrative costs for each year should be about \$318,880 ( $\$1,594,400 \div 5$  years). As of November 5, 2004, the State had drawn \$484,598 for administrative costs, even though the grant would seem to authorize annual administrative costs of only \$318,880. The draw of \$484,598 exceeded the estimated annual administrative costs by \$165,713 and thus appeared to exceed the State’s immediate cash needs.

The Region explained that the draw covered actual expenses for the period from July 1 to October 31, 2004. The Region also stated that the grant’s approved administrative costs of \$1,594,400 were for only a 1-year period ending June 29, 2005. The Region’s explanation raises the question of how the State will support grant activities for the period after June 29, 2005, as the State will have expended its approved administrative cost budget by that date. Since the approved administrative costs were almost at the 5-percent maximum allowed in the Appropriations Act, the State would need to fund most of the future administrative costs to manage grant-funded activity through June 29, 2009. None of these additional State costs would be eligible as matching funds because of the limitation in the Appropriations Act.

The Region needs to document its cost review of administrative expenses. During this process, the Region should clarify the budget period for administrative expenses. If the administrative costs are for 1 year, the application and budget must clearly show this and address how administrative support and costs will be provided for the out years. When resolving this administrative cost issue, the Region must also ensure compliance with the Congressionally mandated limit on administrative costs. If the intention was to cover the period from June 30, 2004, to June 29, 2009, the Region will need to review the State’s cash management practices and recover any funds in excess of the State’s immediate cash needs.

## Recommendations

We recommend that the Acting Regional Administrator, EPA Region 10:

1. Establish controls to ensure that Region 10 fulfills all EPA requirements before awarding grants.
2. Suspend work under Grant No. XP-970847-01 until the State prepares a complete application, and Region 10 adequately completes its review process following all EPA requirements.
3. Ensure that a revised or reinstated award clearly addresses ineligible projects and administrative cost issues, and directly addresses compliance with the Federal cost principles in Office of Management and Budget Circular A-87 and the statutory limits on administrative costs.
4. Place the State on a reimbursement payment basis, in accordance with 40 CFR 31.12, until EPA has verified that the State's cash management system fully complies with the requirements of 40 CFR 31.21 (b).

## Summary of Region 10 Response and OIG Comment

We issued our draft report to Region 10 on March 10, 2005. In its response, the Region concurred with the first recommendation, but did not concur with the second recommendation or some of the findings in the draft report. Based on the Region's response to the draft report, we revised the third recommendation to have the Region assure that the State's accounting of administrative costs meets regulatory and statutory requirements. We also revised the fourth recommendation to emphasize the importance of Federal cash management requirements and the need for immediate change. The Region's full response is provided in Appendix A of this report. Appendix A also includes our comments on the Region's response, in shaded text.

## Scope and Methodology

The audit was conducted in accordance with *Government Auditing Standards*, issued by the Comptroller General of the United States. These standards require that we obtain an understanding of the program to be audited. The understanding of the program was obtained through analysis of the laws, regulations, and guidance pertaining to grants awarded to the State for the Village Safe Water Program and an evaluation of internal controls over the grants. Internal controls include the processes for planning, organizing, directing, and controlling program operations. Internal controls also include the systems for measuring, reporting, and monitoring program performance. Our understanding of the internal controls was gained through the performance of the procedures outlined below.

The audit field work was performed from September 20 to November 5, 2004. Our audit included site visits to EPA Region 10 in Seattle, Washington, to perform the following steps:

- Interview Region 10 managers, including the Office of Water Director and Deputy Director; Office of Management Programs Deputy Director; and Grants Management Officer.
- Interview Region 10 Water Division and Grants Management staff.
- Interview EPA Alaska Operations Office staff.
- Review the official grant files.
- Review project officers' files.

Instances of noncompliance with laws, regulations, and guidance, and deficiencies in the Region's internal control system, have been identified and included in this report. Recommendations have been made to correct the deficiencies.

## ***Region 10 Response and OIG Comment***

April 8, 2005

### **MEMORANDUM**

**SUBJECT:** Region 10's Response to IG's AVSWP Audit Report (Assign. No. 2004-001491)

**FROM:** Ronald A. Kreizenbeck - signed by Julie M. Hagensen, Acting DRA -  
Acting Regional Administrator

**TO:** Michael A. Rickey  
Director of Assistance Agreement Audits

Thank you for the opportunity to provide comments on IG Audit No. 2004-001491, "*Region 10's Grant for Alaska Village Safe Water Program Did Not Meet EPA Guidelines.*" Establishing some relevant context will better frame our response to this particular IG report. We found the comments and recommendations stemming from last year's IG audit of the Village Safewater program exceedingly helpful in both validating the need for the program improvements we were already undertaking and identifying additional areas that could benefit from greater focus. Further, I know that while the IG audit was underway last year, the Region carefully considered all of the IG's concerns and recommendations as we worked with the State of Alaska to process and award the FY2004 grant. As a result, numerous changes were made to improve both the grant process and, of course, the content of the grant itself. It was with no little surprise then that we read the statement in your latest report, "The actions noted occurred even though Region 10 was aware of the findings and recommendations in our previous report that identified improvements were needed..." The statement suggests that the Region was not responsive to recommendations reflected in previous findings. We have had more than several exchanges with IG audit staff in the months intervening the previous report and this latest one substantiating the fact that indeed we have made and will continue to make a number of process-related and substantive improvements related to this grant. I have attached for your reference our response to the original audit report which details what the Region either had done or proposed to do in addressing the IG's concerns and recommendations detailed in last year's report.

I am also compelled to observe that the statement in this latest report, "Region 10 did not comply with EPA guidelines." is overly broad and unequivocal, uninformed by relevant facts Region 10 staff provided IG auditors. While HQ grant guidance could be more explicit and clear on topics with which you have expressed concern, we believe our current effort is consistent with the fundamental intent of the guidance. The report identified four specific issues: grant application did not include objectives; cost review was not timely or adequate; unauthorized cash

management terms were in grant; and authorized period for administrative costs unclear. The Region respectfully disagrees with your conclusions on all of these points, as detailed below.

**OIG Comment** - In its response to the draft report entitled *EPA Oversight for the Alaska Village Safe Water Program Needs Improvement*, the Region agreed to undertake actions to ensure that the grant program will be adequately managed and that its intended environmental results will be achieved. However, the Region awarded the current grant without completing all of the EPA requirements. Also, the Region has the responsibility to clarify the guidance issued by the Grants Administration Division and ensure compliance with requirements.

**Grant Application Did Not Include Objectives** - The objective of the program is to provide safe water and wastewater systems to homes in rural Alaska Communities. The provision of safe water and wastewater infrastructure increases the public health protection afforded to a community as defined in the Technical Report No. 66 by the U.S. Agency for International Development (USAID) (executive summary attached). OMB (Office of Management and Budget) has accepted 'houses served' as the objective for the program PART.

The objective of 'houses served' is consistent with the EPA 2003-2008 National Strategic Plan Sub-objective 2.1.1: Water Safe To Drink: By 2015, in coordination with other Federal agencies, reduce by 50 percent the number of households on tribal lands lacking access to safe drinking water.

The grant application included 'houses served' as the objective for the proposed projects. Thus, the application did include objectives that are in direct support of the 2003-2008 EPA Strategic Plan (Strategic Plan) and will result in public health protection as defined in the USAID Technical Report No. 66.

**OIG Comment** - The Region is faced with a series of challenges in managing and measuring the effectiveness of its grant program to support the Alaska Village Safe Water Program. The adequacy of a measure such as "houses served" needs to be evaluated in the context of the long-term outcome measure for the program. OMB and OIG have identified the lack of a long-term outcome measure as a weakness for the program.

- In its Program Assessment Rating Tool (PART) review, OMB rated the grant program as "ineffective," stating that the program has systemic management deficiencies. For results, the PART review rated the program 7 out of a possible 100, stating that EPA needed to develop a long-term outcome measure.
- The OIG, in its report entitled *EPA Oversight for the Alaska Village Safe Water Program Needs Improvement*, dated September 21, 2004, concluded that the Region had neither developed goals, objectives, and measures for the grant awarded for the Village Safe Water Program, nor included the grant program in its regional strategic plan. As a result, the Region was unable to determine whether grants met legislative

objectives to improve health and sanitation conditions in Alaska’s rural and Native villages. In response to the audit report, the Region agreed to take corrective action to improve the deficiencies.

Some of the weaknesses with the fiscal 2004 grant cited in this report are directly attributable to the deficiencies cited in both the OMB and OIG reports. Until the Region develops specific outcome goals and measures for the program and builds these measures into the grant application review and approval process, the program will be unlikely to demonstrate its effectiveness.

It is unclear how the Village Safe Water Program fits in the Strategic Plan. In its response, the Region linked the Village Safe Water grant program to the Strategic Plan’s Sub-objective 2.1.1, “Water Safe to Drink.” However, the Strategic Plan Crosswalk included in EPA Order 5700.7, *Environmental Results under EPA Assistance Agreements*, linked the program to Sub-objective 2.2.1, “Improve Water Quality on a Watershed Basis.” The Region did not mention Sub-objective 2.2.1 in its response which seems inconsistent since an EPA order links the Village Safe Water Program to Sub-objective 2.2.1.

In its response, the Region stated that the program also supported the goal to reduce, by 50 percent, the number of households on tribal lands lacking access to safe drinking water. The Village Safe Water Program deals with villages other than Alaskan Native Villages. For example, the Village Safe Water Program funds projects for rural villages and second class cities. Therefore, it would appear that the sub-objective chosen by the Region does not address the Village Safe Water Program in its totality.

The fact that there are different thoughts about where the Village Safe Water grant program fits under the Strategic Plan only highlights the need for the Region to specifically address this grant program in its strategic plan. This program was specifically authorized by Congress to address health and sanitation conditions in Alaska’s rural and Native villages, combining under one program the development of community drinking water and wastewater systems as well as training, technical assistance, and education relating to the operation and maintenance of sanitation services. The uniqueness of the program demonstrates the need to establish its own goals and measures through the regional strategic planning process.

The Region also stated that OMB accepted “houses served” as the objective for the program. OMB identified “houses served” as an output measure, and not an outcome. EPA Order 5700.7 defines output and outcome measures as follows:

*The term “outcome” means the result, effect or consequence that will occur from carrying out an environmental program or activity that is related to an environmental or programmatic goal or objective. Outcomes may be environmental, behavioral, health-related or programmatic in nature, must be*

*quantitative, and may not necessarily be achievable within an assistance agreement funding period.*

*The term “output” means an environmental activity, effort, and/or associated work products related to an environmental goal or objective, that will be produced or provided over a period of time or by a specified date. Outputs may be quantitative or qualitative but must be measurable during an assistance agreement funding period.*

Following the definitions within EPA Order 5700.7, the use of “houses served” would reflect the outputs of the grants to the State but not necessarily the environmental result or outcome. As stated in the Order, outputs do not by themselves measure the programmatic or environmental results of an assistance agreement.

In addition, the grant application only provided information on houses served for 13 of 33 projects. The other 20 projects included 13 construction projects with the segments to be constructed. For example, the project for the City of Shageluk is described as:

*Provide a 3.5 acre sewage lagoon, a sewer line extension and access road to the lagoon, and necessary fencing. This project will provide only a portion of the funds needed to meet the sanitation needs of the community. Additional funds will be needed in the future to fully fund the community system.*

No mention is made of the “houses served.” The other 7 of the 20 projects listed the study to be prepared and not the proposed environmental or public health objectives to be achieved. For example, the City of Teller’s project is described as:

*A completed study regarding "first time" water and sewer service for non-seasonal residents.*

As a result, the grant application does not appear to address the proposed environmental or public health objectives based upon the Region’s criteria.

EPA, in its Long Term Grants Management Plan, emphasized the importance of including environmental outcomes in grant work plans and to link activities to measurable outcomes. Before it can incorporate measures into the grant work plan, the Region needs to determine the long-term goal and measure for the program. Because of the unique issues and specific geographic area that the Alaska Village Safe Water Program addresses, the program is not specifically mentioned in the Strategic Plan and should be addressed in the Region’s strategic plan. Once the Region develops the strategy and measures for addressing health and sanitation conditions in Alaska native and rural villages, it will be in a position to link activities in the grant work plan to the goals and to link activities to measurable outcomes.



**Cost Review Was Not Timely or Adequate** - As described during the prior audit of the Alaska Village Safe Water Program, the cost review for the construction portion of the grant was completed after the award of the grant because the State had not compiled detailed information about the projects to complete the required cost review at the time of submittal. This level of information was not required by the Region for previous grant applications. Once notified of the cost review requirements, the State compiled the required information based on conceptual designs and submitted the information to the Region for the required cost review. The State has since modified its own grant application process for FY05 so that the cost review information will be included at the community level and made available to Region 10 at the time of application.

As with the construction portion of the grant, the cost review of the administration portion of the grant was completed after the award of the grant. The Region's cost review compared the requested budget to what the Federal Government would pay if the Federal Government was to administer the program directly. The cost review resulted in the determination that the State's requested budget was less than that estimated for the Federal Government's direct administration of the program. Thus, the State's request was considered reasonable. Given that the budget request was based on program expenses from the previous year, the program had, by extension, a reasonable chance to fulfill its objectives.

**OIG Comment** - The Region acknowledged that the grant was awarded prematurely and agreed that six projects recommended by the Project Officer for elimination, totaling \$4,759,500, remain in the grant award. The fact that the Region has never required construction cost information in prior grants does not relieve the Region from its responsibility to follow all grant requirements prior to the grant award. In connection with its review of administrative costs, the Region did not follow the guidelines in Grants Policy Issuance 00-5, dated June 2000, for performing cost reviews. This policy was written to establish uniform procedures and guidance for reviewing and evaluating proposed costs included in grantee's budgets. The policy defined a cost review as a review of a budget to ensure that costs are necessary, reasonable, allowable, allocable, and adequately supported. The policy also provided a guide for performing cost reviews, and included the following steps in the review of personnel costs:

- (1) The level of effort or the total amount of time proposed. The proposed effort should be consistent with the effort required by the work plan.*
- (2) The labor mix or the labor categories proposed. Labor mix should be consistent with the caliber of effort – professional/nonprofessional/clerical – required by the grant work plan.*
- (3) The current salary plus a reasonable escalation factor during the program/project. Generally, the conversion of annual salaries into hourly rates is accomplished by dividing the annual salary by 2,080 hours assuming an eight hour work day.*

The Region's review of administrative costs did not meet the requirements of Grants Policy Issuance 00-5 and would not appear to be adequate.

**Unauthorized Cash Management Terms Were in the Grant** - The State was notified in 2004 that it must discontinue drawing construction funds in advance and must follow all U.S. Treasury cash management requirements. Following this notification, the State took significant actions to implement a new program to draw down Federal funds only as they are needed, consistent with U.S. Treasury cash management requirements. The expectation that a complex construction program such as this could make major financial management changes within a very short period of time is not reasonable. The Region and the State negotiated a one-year time frame to implement the new cash management requirements. Progress on this score has already been realized and the projected date for complete implementation of the new system is July 1, 2005.

**OIG Comment** - The Region is not entitled to waive the U.S. Treasury Regulations and allow the State to draw funds in excess of its immediate cash needs. To do so would also contradict the Region's July 14, 2004, letter to the State informing the State that it must not draw funds in advance of actual immediate cash needs. The reasonableness of a change in financial management is not relevant when the current practice contradicts U.S. Treasury Regulations. The State must be required to comply with the U.S. Treasury Regulations and revise its cash draw down procedures as well as its "Forecast of Federal Cash Needs."

**Authorized Period for Administration Costs Unclear** - The statutory authorization language for the program states that "no more than 5 percent of the funds may be used for administration and overhead expenses." The language does not indicate that the administration funds are only for the administration of specific projects funded that fiscal year. As with previous grants, the State has chosen to use all of the requested administration funds during the 2005 State Fiscal Year as indicated in their forecast of Federal cash needs. Note that the State requested less than what it could have been requested (given that five percent of \$43 M equates to \$2.15 M - the State requested \$1.6 M).

The Region recognizes that providing administrative support funding annually based on specific ongoing project needs has merit, especially as the individual projects typically run for several years and the prospects for out-year funding are always uncertain. We will discuss with the State employing this approach relative in future grants.

Future administration expenses will be covered with future Federal administration funds and State funding. Administering the program on one fifth of the requested \$1.6M annually (or \$320,000) would be almost impossible. This approach would have been feasible had the State chosen to prorate the amount of administration funds based on the length of the grant at the time the program was developed. For this approach to work at this point in the program, a large amount of funds would be required to pay for the prorated portion of the administration funds for the projects funded under previous grants.

**OIG Comment** - The Region's response raises concerns about regulatory compliance regarding the charging of administrative costs. We also believe that the State's practice of using most of the approved administrative costs during the first year of a 5-year grant period increases the risk that administrative costs are not limited to the required 5 percent.

Title 40 CFR 31.22 requires the State to follow the cost principles in OMB Circular A-87, *Cost Principles for State, Local and Indian Tribal Governments*. These principles define a direct cost as any cost that can be identified specifically with a particular final cost objective, which in this case is the grant. This definition would prohibit charging one grant directly while working on the activities included in and authorized by another grant. Therefore, the State can only use the administrative costs in Grant No. XP-970847-01 for the projects and activities authorized in the same grant. Using the administrative costs in Grant No. XP-970847-01 to manage or oversee activities and projects approved in prior grants is unallowable and could result in the forfeiture of claimed costs. Further, if the State uses all the approved administrative costs during the first year of the 5-year grant period, there will be no Federal funds available to manage and oversee the projects authorized by the grant, which the Region acknowledges takes several years to complete. EPA runs the risk of poor or no project oversight by the State unless the State is able to fund the oversight activity with its own money.

Our second concern is the vulnerability Region 10 has for ensuring that administrative costs are limited to the required 5 percent. As the Region noted in its response, the fiscal 2004 appropriation for the Village Safe Water Program grants, Public Law 108-199, states that "no more than 5 percent of the funds may be used for administration and overhead expenses." However, the authorizing legislation, Public Law 104-182, Section 303 (33 U.S. Code 1263a), states:

*The State of Alaska may use an amount not to exceed 4 percent of any grant made available under this subsection for administrative expenses necessary to carry out the activities described in subsection (a).*

The authorizing legislation clearly limits the administrative costs for each grant. Using administrative cost authorized under one grant to manage and oversee projects and activities authorized under a different grant reduces the accountability of funds for each grant. This lack of accountability weakens the Region's ability to ensure that expenditures meet the statutory limitation on administrative expenses.

Finally, with respect to recommendations reflected in the subject IG report, please note our responses below.

1. Costs reviews were not performed prior to the award of the FY04 grant for reasons already detailed. Costs reviews will be performed prior to the award for the FY05 grant.

2. EPA does not believe that sufficient justification exists to suspend work under Grant No. XP-970847-01 at this time. The Agency believes that the application is complete as it contains environmental outcomes that directly support the EPA 2003-2008 Strategic Plan and that have been accepted by the OMB PART review process.

3. The Region will revise the FY04 award to incorporate the results of the completed cost review and define the administrative costs for the July 1, 2004 to June 31, 2005 time frame.

4. The Region will modify the grant terms to indicate that the state will meet the U.S. Treasury cash management requirements.

**OIG Comment** - In its response, the Region generally concurred with Recommendation 1.

The Region did not agree with Recommendation 2 and believed that the application is complete, because it contains environmental outcomes that directly support the Strategic Plan and have been accepted by the OMB PART review process.

The Region also believed that it had carefully considered all of the OIG's concerns and recommendations as it worked with the State to process and award the grant. As a result, numerous changes were made to improve both the grant process and, of course, the content of the grant itself. The Region referred to its response to the draft report, entitled *EPA Oversight for the Alaska Village Safe Water Program Needs Improvement*, to list the actions that the Region has taken or would take in connection with future grant awards to the State. The Region also believed that while Headquarters grant guidance could be more explicit and clear on topics with which the OIG has expressed concern, its current effort is consistent with the fundamental intent of the guidance.

We do not agree with the Region's conclusion regarding Recommendation 2, and believe that the grant application does not include environmental outcomes supporting the Strategic Plan. Also, the grant application contains six projects, totaling \$4,759,500, that the Project Officer recommended for elimination. Therefore, the application is not accurate or supportive of the entire amount awarded.

With respect to Recommendation 3, the Region did not disagree, but clarified that the administrative costs were for 1 year. This clarification raises questions concerning compliance with Federal cost principles and assurances that the statutory limit on administrative cost would be met. Consequently, we revised the recommendation to have the Region ensure that the State's accounting of administrative costs fulfill regulatory and statutory requirements.

We also revised Recommendation 4 to emphasize the importance of Federal cash management requirements and the need for immediate change.

Again, thank you for the opportunity to comment. Should you have any questions, please feel free to contact Marie Jennings of my staff at 206-553-1893.

Attachments: (1) EPA Response to IG Audit Report No. 2004-P-0029-Appendix B  
(2) USAID Technical Report No. 66, Executive Summary

cc: Marie Jennings - OWW  
Mike Gearheard - OWW  
Dennis Wagner - OWW  
Jon Schweiss - RAO  
Jane Moore - OW/HQ

**OIG Comment** - In its response, the Region included two attachments. The first was a copy of OIG Report No. 2004-P-00029. A copy of this report can be obtained at <http://www.epa.gov/oig/reports/2004/20040921-2004-P-00029.pdf>.

The second attachment was a report prepared by the United States Agency for International Development entitled: *Health Benefits from Improvements in Water Supply and Sanitation: Survey and Analysis of the Literature on Selected Diseases*. A copy of the attachment is included starting on the next page.

WASH Technical Report No. 66

**HEALTH BENEFITS FROM IMPROVEMENTS  
IN WATER SUPPLY AND SANITATION:  
SURVEY AND ANALYSIS OF THE LITERATURE  
ON SELECTED DISEASES**

Prepared for the Office of Health,  
Bureau for Science and Technology,  
U.S. Agency for International Development,  
under WASH Task No. 035

by

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## EXECUTIVE SUMMARY

This report reviews and analyzes the findings of a number of studies of the impact of improved water supply and sanitation facilities on six diseases: diarrheal diseases, ascariasis, dracunculiasis (guinea worm), hookworm, schistosomiasis, and trachoma. The studies were restricted to those written in the English language. These particular diseases were chosen for review because they are widespread and because they illuminate the variety of mechanisms through which improved water and sanitation may protect people. For example, providing safe, potable sources of drinking water blocks the transmission of guinea worm, while using larger quantities of water for personal hygiene helps to stop the spread of trachoma. Improving domestic hygiene practices and providing excreta disposal facilities are also important mechanisms for interrupting disease transmission.

The following table illustrates the prevalence and the adverse health consequences of these diseases in developing countries. These diseases are either widespread in the developing world, constitute serious problems where they exist, or both.

INCIDENCE AND EFFECTS OF SELECTED DISEASES IN DEVELOPING COUNTRIES (EXCLUDING CHINA)		
DISEASE	ESTIMATED CASES/YEAR	ESTIMATED DEATHS/YEAR
DIARRHEA	875 MILLION	4,600,000
ASCARIASIS	900 MILLION	20,000
GUINEA WORM	4 MILLION	*
SCHISTOSOMIASIS	200 MILLION	*
HOOKWORM	800 MILLION	*
TRACHOMA	500 MILLION	**

\* EFFECT IS USUALLY DEBILITATION RATHER THAN DEATH  
\*\* MAJOR DISABILITY IS BLINDNESS

A total of 144 studies were reviewed for this report. When possible, a percentage reduction in disease attributable to water, sanitation, hygiene, or any combination of these, was calculated for each study. Only those studies with identifiable reduction rates were further analyzed. Grouping the studies for each disease, a disease-specific median reduction figure was then calculated, and a second median reduction figure was derived for the more methodologically rigorous (better) studies. These figures are shown in the table below.

EXPECTED REDUCTION IN MORBIDITY AND MORTALITY FROM IMPROVED WATER SUPPLY AND SANITATION*						
	ALL STUDIES			BETTER STUDIES		
	NO.	MEDIAN	RANGE	NO.	MEDIAN	RANGE
<b>DIARRHEAL DISEASES</b>						
· MORBIDITY	49	22%	0%-100%	19	26%	0%-68%
· MORTALITY**	3	65%	43%-79%	-	-	-
ASCARIASIS	11	28%	0%-83%	4	29%	15%-83%
GUINEA WORM	7	76%	37%-98%	2	78%	75%-81%
HOO KWORM	9	4%	0%-100%	-	-	-
SCHISTOSOMIASIS	4	73%	59%-87%	3	77%	59%-87%
TRACHOMA	13	50%	0%-91%	7	27%	0%-79%
<b>OVERALL IMPACT</b>						
ON CHILD MORTALITY	9	60%	0%-82%	6	55%	20%-82%

FOR ADDITIONAL INFORMATION SEE APPENDIX B, TABLE 7.  
 \* INDICATES MORBIDITY REDUCTION UNLESS NOTED OTHERWISE.  
 \*\* THERE WERE NO "BETTER" STUDIES.

The results of the studies selected for analysis show that the impact of water supply and sanitation is significant. Median reductions in morbidity (i.e., incidence and prevalence) calculated from the better studies range from 26 percent for diarrhea to a striking 78 percent for guinea worm and 77 percent for schistosomiasis. In between lie ascariasis and trachoma at 29 and 27 percent respectively. All studies of hookworm were flawed with one exception—which found a 4 percent reduction in incidence. For hookworm, ascariasis, and schistosomiasis, the reduction in egg counts was greater than the reduction in incidence or prevalence, suggesting that there is also a reduction in disease severity which is often overlooked.

The substantial impact of water and sanitation on child survival is also demonstrated by the studies reviewed. For overall child mortality, nine studies indicated a 60 percent median reduction, with a figure of 55 percent emerging from the six better studies; unfortunately, none of the better studies specifically addressed diarrheal disease mortality reduction.

In summary, broad, demonstrable health impacts affecting all age groups in most of the developing world can be expected from improvements in water supply and sanitation. This review also found that reductions in disease severity are sometimes larger than reductions in incidence. However, the importance of this impact is often overlooked. To maximize the health impacts identified in this review, the following factors should be considered:

- The water supply should be as close to the home as possible—to increase the quantity of water available for hygiene practices.



- Water supply and health programs should emphasize hygiene education to encourage people to use more water for personal and domestic purposes.
- Sanitation facilities should be culturally appropriate, since use of the sanitation facility will affect its health impact—probably reflecting the importance of user acceptance.
- Use of facilities is essential during critical seasonal transmission periods for diseases, such as guinea worm, which have such periods.
- In achieving broad health impacts, safe excreta disposal and proper use of water for personal and domestic hygiene appear to be more important than drinking water quality.
- Sanitation facilities should be installed in conjunction with water facilities when fecal-related diseases are prevalent.

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