

HB

68

MINUTES

DATE: Feb. 2, 1979

All members present

HB68 Village Safe Water Act

Sponsor: Chat Chatterton

Testifying:

Rep. Chatterton - Act first administered by HESS then transferred to DEC. Says design expertise exists in Transportation and Public Facilities. Fish hatcheries now done by Public Facilities. Referred to Gov's Report on Efficiency and Management which stated that program should be disbanded.

Don Clockson -- Alaska Legal Services Opposed.  
DEC is cautious with state funds. DEC outstanding in advance planning. Says three questions should be answered by the Committee:

1. Cost of transfer?
2. Activities of Village Safe Water Program for the last 2 years
3. How would agency work with Bush?

John Scribner-- Dept. of Environmental Conservation--Opposed  
9 projects completed--2 in progress  
Grants made to villages  
DEC contracts for consultant for Village  
Consultant designs and constructs  
Owned by Village from beginning and operated by Village.  
Public Health Service has water program also so confusion often results.  
Costs 25% less than with competitive bidding  
Local hire used otherwise union labor.  
Local people trained to operate facilities  
\$5-6 Million put in program not counting recent \$7.8 Million bond appropriation

Hearing to be continued.

See Tape 1 Side 1 Sections 1347-1500



Official Business

# Alaska State Legislature

## House of Representatives

Committee on

Community & Regional Affairs

Pouch V  
State Capitol  
Juneau, Alaska 99811

Hearing (H) CRA

DATE: Feb. 6, 1979

HB 68 Village Safe Water Act

All members present.

John Scribner, Dept. of Environmental Conservation  
Gave cost figures for projects presently in operation and  
background material on the goals, objectives, and operation  
of the Village Safe Water Act.

Jerry Sargent, director of Village Safe Water program  
Points out that Program is basically a grant program rather than  
a construction program.

D.E.C. opposes bill.

Richard Holden--Dept. of Transportation and Public Facilities  
Dept. is not interested in administering program.

Rep. Chatterton --Sponsor  
Suggests that "forced accounting" should be tried in Village  
Safe Water Program.

Action on HB 68 postponed till Feb. 19. Rep. Carney and  
Rep. Chatterton will do some research on the Program and  
report back to the Committee at that time.

See Tape 1 Side #2 Section 1-638

BILL WORK SHEET

No. 4

(for optional use of committee aides)

COMMITTEE ON CRA

Received from: \_\_\_\_\_ DATE 1/25/79

BILL NO. 68 ORIGINAL SPONSOR Chatterton OTHER \_\_\_\_\_

THIS COMMITTEE RECOMMENDED --

Majority Recommendation: \_\_\_\_\_

Supported by \_\_\_\_\_

Minority Recommendation: \_\_\_\_\_

Supported by \_\_\_\_\_

Other: \_\_\_\_\_

Brief/flag title: \_\_\_\_\_

What bill does:

OUR COMMITTEE AMENDMENTS (what they are and what they do (attach if lengthy))

Fiscal Impact -- Is there a fiscal note for the original bill and one which reflects changes made by the amendments: (attach details).

LAA Legal/Research contact:	Research/supporting information Attached (?) _____
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PERSONS/ORGANIZATIONS:

Supporting bill: Richard Holden - Dept. of Com. Facilities Planning Research 3900

Opposing bill: John Scrubner - D.C. 2640 Dir. of Div. of Water Programs

REMARKS: (use reverse side if necessary)



Official Business

# Alaska State Legislature

## House of Representatives

Committee on

Community & Regional Affairs

Pouch V  
State Capitol  
Juneau, Alaska 99811

TO: ALL COMMITTEE MEMBERS

FROM: REP. BILL PARKER, Chairman

RE: HB 68 relating to the Village Safe Water Act

The following recommendations are excerpted from the Governor's Management and Efficiency *Review Report*

### Recommendations

254. Discontinue construction of village safe water projects.

The village safe water program is financed completely by the state and there is substantial concern about its effectiveness. The program applies to villages with population ranges of from 25 to 600 persons. Approximately \$5-million has been spent to complete eight projects and three more are scheduled.

A fiscal 1977 request of \$2-million has been made for the program plus an additional \$300,000 for annual maintenance work. The maintenance figure could double as additional projects are completed. The villages are unable to operate and maintain the facilities and a decision must be made on the future of the program.

In view of the inability of the villages to run these facilities successfully, the construction program should be discontinued. As some of the native corporations involved become more experienced, they could contract with the state for such a program, recognizing that rural water and waste disposal systems are almost never financially self-sustaining. Implementation would result in an estimated one-time cost avoidance of \$2-million and an annual saving of approximately \$300,000.

*pp. 135, 139*

The final implementation report of the Governor's Management and Efficiency Review states that this particular recommendation has not been implemented. (See p.10)

VILLAGE SAFE WATER PROGRAM  
An Update to January 20, 1977

Introduction

The Village Safe Water Act (AS 46.07), passed in 1970, calls for "at least one facility for safe water and hygienic sewage disposal in each village" in Alaska. Little progress was made in the program until December of 1972 due to lack of funds, inability to hire someone to administer the Village Safe Water (VSW) program, and lack of operation and maintenance provisions. Since 1972, six VSW facilities have been constructed, two more are nearly complete, and another is being designed. In addition, an operation and maintenance support program and a comprehensive planning effort have been organized and initiated.

Construction

The six VSW facilities constructed to date are in the villages of Northway, Chavak, Alakanuk, Selawik, Nulato and Pitkas Point. A facility will be completed in Beaver in January, 1977, and in Koyukuk in February of 1977. A facility for Kongiganak is being designed, and construction is scheduled for summer of 1977.

At the nine locations listed above, the VSW projects consist of central sanitation facilities to which village residents can come to obtain water supply, sewage disposal, bathing and laundry services. No piped water distribution or sewage collection systems are involved except for water and sewer service lines to schools.

Construction methods used so far have included: 1) competition bid construction contracts administered by the Alaska Department of Public Works, 2) competitive bid construction contracts administered by the Alaska Department of Environmental Conservation (ADEC), and 3) force account construction by the villages through construction management contracts with engineering consultants. All facilities so far have been designed by engineering consultants.

The force account/construction management method of construction has been the most satisfactory of the three methods used. Facilities constructed that way have been built cheaper and faster than those built under competitive bid construction contracts; the quality of construction has been better; and the villages have been more intimately involved in, and satisfied with, their projects.

VSW facilities have cost from \$350,000 at Pitkas Point (begun in FY 76) to almost \$1,200,000 at Selawik (begun in FY 74). Villages served have ranged in size from 85 (Pitkas Point) to over 500 (Selawik).

#### Operation and Maintenance

Experience in the VSW program has confirmed that virtually any utility system installed in remote Alaskan villages is doomed to eventual failure unless the village is given financial, technical, and/or management assistance. Any program for providing utilities in rural Alaska must either adequately provide for long term operation and maintenance, or expect system failures that adequate operation, maintenance and management could have prevented.

Goals and Objectives  
"SW Comprehensive Planning

GOAL

To develop a statewide comprehensive program for providing sanitation services in rural Alaska.

PLAN OBJECTIVES

1. Inventory existing water supply and sewage disposal facilities in rural Alaskan villages.
2. Develop criteria for evaluating the adequacy of existing water supply and sewage disposal facilities identified in # 1 above.
3. Identify existing agency programs providing sanitation facilities to Alaskan villages. Quantify the resources currently available. Identify and describe the technical, management and administrative approaches presently used.
4. Develop criteria to evaluate the effectiveness of these programs.
5. Evaluate the adequacy of technical, management and administrative approaches identified in #3. above.
6. Identify and evaluate alternative technical, administrative and management methods that might be used to address sanitation needs in rural Alaska.
7. Recommend changes in the activities and resources of existing programs to incorporate the alternatives noted in # 6 above. Recommend new programs and/or authority necessary for implementation.
8. Analyze existing methods of operation, maintenance and management of village sanitation facilities.

In FY 76, the annual operating budgets for VSW facilities ranged from \$28,000 at Northway to over \$100,000 at Selawik. ADEC provided a total of about \$225,000 in VSW operation and maintenance grants in FY 76 to six villages. In addition, ADEC provided technical and management assistance to the six villages. Although expensive, the VSW operation and maintenance support program has made it possible for all completed VSW facilities to serve the public as intended.

### Comprehensive Planning

ADEC is developing a comprehensive plan intended to define the roles of State and federal agencies and other groups involved in providing rural sanitation services. An early step in this planning is to inventory all village sanitation facilities. Completing this inventory is viewed as the cornerstone of the VSW planning effort.

The Ninth Alaska Legislature passed a resolution suggesting that a VSW advisory committee be organized consisting of representatives from the 12 Native Regional Service Associations. This committee would assist ADEC with policy and management decisions concerning the VSW program. The Department feels the advisory committee is a good idea and welcomes increased involvement for the Regional Associations.

Several local, State, federal and private organizations participate either directly or indirectly in providing rural sanitation services. A strong working relationship must be developed among the diverse groups if a comprehensive plan for sanitation services throughout rural Alaska is to be successfully developed and implemented.

9. Develop alternative methods for operation, maintenance and management of village sanitation facilities.
10. Recommend changes in the activities and resources of existing programs to incorporate the alternative approaches noted in #9 above.
11. Integrate the findings of the above analysis with the comprehensive plan.
12. With the assistance of the appropriate governmental agencies and Native non profit regional associations, proceed to implement the plan.

#### PUBLIC INVOLVEMENT & PROGRAM COORDINATION

Because several local, State and federal organizations participate either directly or indirectly in developing rural sanitation facilities, this major planning effort can not be undertaken alone. To insure proper plan development and implementation, a strong working relationship must be developed among the diverse groups currently working on rural sanitation problems.

Public participation and inter-agency coordination must be an integral part of the VSW comprehensive planning process. In this regard, a maximum effort will be made to enlist the active participation of the native regional health organizations, the villages and appropriate federal and state agencies. We hope that by the time a draft of the plan has been formulated, significant public comment and coordination will have been obtained. The results of our collective efforts will be a comprehensive plan for providing rural sanitation services in Alaska.

#### Principal Contact

For more detailed information on the Village Safe Water comprehensive planning process, please contact:

Greg Capito  
Senior Planner  
Alaska Department of Environmental Conservation  
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Juneau, Alaska 99811  
Phone: 455-2664

THE STATE OF ALASKA  
VILLAGE SAFE WATER PROGRAM

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-Case Studies-

Prepared by Greg Capito  
Alaska Department of  
Environmental Conservation

ONE

# MEMORANDUM

State of Alaska

TO: The Honorable Jay S. Hammond  
Governor

DATE: September 12, 1975

FILE NO:

TELEPHONE NO:

FROM: Ernst W. Mueller  
Commissioner  
Dept. of Environmental Conservation

SUBJECT: Village Safe Water  
Program

Several months ago I requested Dr. Jerry Sargent, who is in charge of our Department's Village Safe Water Program administered under AS 46.07, to prepare a comprehensive briefing paper so that you and your staff can be more informed on that program, its successes and failures, and our plans for the future, of this program. That paper is now completed and is attached.

In particular, this briefing will (1) help provide you with a basis for evaluating VSW capital requests this Department will make over the next several years, and (2) apprise you of the need for defining State policy concerning operation and maintenance of VSW facilities, and perhaps rural utility systems in general. During the current fiscal year, we will be making recommendations to you and the Budget Review Committee concerning these two areas. We hope this information will be helpful to you in evaluating them.

Enclosure

bc: Mr. Scribner/Dr. Sargent

THE VILLAGE SAFE WATER PROGRAM

A Briefing for Governor Hammond

Prepared by

The Department of Environmental Conservation

August, 1975

Juneau, Alaska

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## I. THE STATUTE

The Village Safe Water (VSW) Act of 1970 (AS 6.07.010-080) was passed for the purpose of providing "safe water and hygienic sewage disposal facilities in villages in the state," and "to assure that there will be at least one facility for safe water and hygienic sewage disposal in each village." The Act stipulates that each facility will provide at least a safe water supply, means for sewage disposal, and bathing and laundry services. A village is defined as "an unincorporated community which has between 25 and 500 people residing within a two-mile radius, or a second class city." The Department of Environmental Conservation (ADEC) is seeking to have "or a second class city" deleted from that definition because some second class cities in Alaska are big enough that a central facility could not provide adequate sanitation services.

A village receiving a VSW project is not required to contribute toward costs of construction. The State may "provide for construction by contract or through grants to public agencies or private nonprofit organizations, or otherwise."

When a VSW facility is completed the recipient village must be given title to it. The village must agree to accept ownership of the facility and be responsible for its operation and maintenance. The State may assist a village with operation and maintenance expenses when the local governing body lacks sufficient financial resources.

## II. BACKGROUND AND PAST PROJECTS

In April of 1974 the Budget Review Committee requested ADEC to prepare an Issue Analysis on the Village Safe Water Program. The complete text of that analysis appears in Appendix A of this report.

The following excerpts from the VSW Issue Analysis describe activities in the program through June of 1974:

... Voters approved a three million dollar bond issue in 1970 to fund the VSW program and another one million dollar bond issue in 1972. Little progress was made in the program, however, until December, 1972 for the following reasons: 1) no money was available to administer the program until October, 1972 and even when the VSW staff position became available, a person suitable to fill it could not be found; and 2) no provision had been made for funds to operate and maintain VSW facilities and ADEC was reluctant to construct facilities without assurance they would operate properly.

In December, 1972, a member of the ADEC staff began a survey of sanitation facilities in small villages throughout Alaska (most of which are native villages) to determine which villages were most in need of VSW projects. Letters were written to government agencies (e.g., the United States Public Health Service and the Bureau of Indian Affairs), native associations (e.g., regional corporations and health corporations) and other organizations with knowledge of village sanitation problems, requesting information and suggestions concerning plans for VSW projects. As a result of this study 32 villages were identified as being most in need of the sanitation services specified by the VSW Act. Meanwhile, in late 1972 and early 1973, the villages of Northway and Chevak requested assistance under the VSW program in finishing central facilities they had begun to construct on their own initiative. Since Northway and Chevak had committed their own resources and thus demonstrated a sincere desire to improve sanitation in the villages they were granted assistance. Then in early 1973, the Department of Education, lacking funds to provide water and waste services for the new schools scheduled for construction in remote villages in 1973-74, asked ADEC to install VSW facilities in Alakanuk, Selawik and Nulato to provide sanitation services for the new schools to be built there in addition to providing sanitation services for the villages. ADEC agreed to do so provided the Department of Education would agree to provide all funds and logistical support necessary for continued operation and maintenance of the VSW facilities. . . .

... Five villages are receiving major central sanitation facilities construction projects under the VSW program (Northway, Chevak, Alakanuk, Selawik and Nulato). In addition, Arctic Village was granted

a few thousand dollars to buy washing machines and dryers to install in a facility constructed by the U. S. Public Health Service. Total expenditures in the six villages will be approximately three million dollars, leaving about one million dollars for additional projects...

...To date there has been little need for priority criteria for VSW projects. Staff and money have not been available to identify villages qualified for and in need of VSW assistance, so there is little to prioritize. Thirty-two villages were identified as being in critical need of a safe water source, [but much more study and coordination is necessary to determine which villages should receive VSW assistance and the extent of each facility.]

In general, only villages in most critical need of a safe water supply have been considered for VSW projects. Also important is the village's ability to operate and maintain facilities installed, either unassisted or through arrangements with a school, PHS clinics or other sources of revenue.

Nearly three-fourths of the VSW program's bond money was used for the three joint projects with ASOSS high schools. Those projects were chosen less according to VSW priority criteria than in response to Department of Education pleas and expressed willingness to operate and maintain the finished facilities. Remaining money will be devoted to three or four villages where water supply needs are critical and schools and clinics can provide revenue for operation and maintenance."...

Since June of 1975, the villages of Beaver, Koyukuk and Pitkas Point have been selected to receive VSW projects. They were chosen based on their especially critical need for sanitation services, which need was identified during the ADEC survey of village sanitation facilities begun in December of 1972. The three projects are being funded out of the approximately \$800,000 that remain in the VSW bond funds after the projects in Northway, Chevak, Arctic Village, Nulato, Selawik and Alakanuk are completed.

### III. EVALUATION OF PROJECTS TO DATE

The VSW program is new to Alaska State government and virtually without precedent. [Hence the best methods for achieving the mission of the program are still being worked out as experience is gained.]

The Arctic Village project did not involve any construction since VSW funds were provided only for buying washing machines and dryers.

The Northway and Chevak projects consisted of adding to and finishing central sanitation facilities that the villages had started to build on their own initiative. ADEC hired engineering consultants to design and prepare plans and specifications for the improvements made with VSW funds, after which ADEC awarded competitive bid construction contracts to have the work done. These two projects went reasonably well, although at Chevak the termination date of the construction contract had to be extended several months partly due to adverse weather conditions.

At Nulato, Selawik and Alakanuk the VSW facilities are being built in conjunction with new State schools. In each village the school and VSW facility have been designed and are being built under contracts prepared and administered by the Division of Buildings, Department of Public Works. These projects have been most unsatisfactory as is illustrated by the following excerpts from the VSW Issue Analysis:

... "One purpose of this issue analysis is to investigate the assumption it is cheaper to construct capital facilities in remote Alaskan villages simultaneously and under the same contract whenever possible. The VSW projects and State high schools in Alakanuk, Selawik and Nulato were expected to cost less by joint construction than if they were built under individual contracts. So far, the VSW facilities are costing more than twice what was originally estimated by the architectural and engineering consultants retained by the Department of Public Works, Division of Buildings; and the facilities themselves have been scaled down...

... Whether or not it is more efficient to construct two or more State capital projects jointly (one contract) in a remote village than to build them separately is not an easy question. At first

blush, one might think it obvious joint projects would be cheaper since contractor mobilization costs should be less and one large contract should be cheaper to administer than two or more smaller ones. Experience, however, has not given unqualified support to that thesis.

Experience with joint construction in the VSW program is limited to the three projects in Alakanuk, Selawik and Nulato. They have been very unsatisfactory projects from ADEC's point of view in that they have cost double what was anticipated, the facilities had to be scaled down as costs became exorbitant, and monitoring the contract procedure became virtually impossible. The causes of these problems are many and complex. Perhaps among them are: 1) the jobs were big and complex enough that including them in one contract was unwieldy, 2) the consulting engineers and architects did less than satisfactory work, 3) the contract documents were poorly and incompletely done, 4) ADEC did not exert enough control over work done by the consulting engineers and architects, 5) the Division of Buildings did not (perhaps due to lack of time and expertise) critically monitor work prepared by the consulting engineers and architects, and 6) ADOE imposed a severe time limit on time available to prepare the projects for construction.

The major and perhaps root cause of the many problems with the three projects was lack of time for adequate design and contract preparation. The consulting engineers and architects claim they did not have time to do the kind of job they would like to have done. On the other hand, in preliminary negotiations with the consultants about doing the jobs, they indicated the limited time would be "no problem." The Division of Buildings might have been expected to notice the inadequacies in the consultants' work, but they claim not to have had time to review the work properly. Lack of expertise may also have been a factor. Perhaps ADEC should have kept closer track of work done by the consultants; but being insulated from the consultants, contracts and contractors by the Division of Buildings made communication and effective participation difficult.

Joint construction may be just too difficult to organize and administer (at least for certain types of projects) given State construction procedures. On the other hand, ADEC's disappointing experience in joint construction may be due to causes not attributable to joint construction per se. Perhaps some future VSW projects should be built with ADEC managing consultants and contracts directly to see if that method has advantages. Another possibility is force account work, managed either by ADEC or the Division of Buildings". . .

The Division of Buildings called a final inspection for the Nulato project on November 13, 1974. ADEC discovered many deficiencies in the VSW facility during the final inspection, and the Department has since then experienced great difficulty in getting the deficiencies resolved. Appendix D consists of copies of

correspondence that illustrate the specific problems with the Nulato project. Final inspection for the Selawik and Alakanuk projects is scheduled for the Fall of 1975.

Design and construction of the VSW facilities for Beaver, Koyukuk and Pitkas Point are being managed directly by ADEC through grants to the villages. For each project ADEC, the village, and a consulting engineering firm enter into three-way contracts; one for design and one for construction management. The design contract specifies the scope of work to be performed by the engineering consultant, sets the compensation rate for design services and prescribes the procedure by which the village pays the consulting engineer with VSW grant money from ADEC. Under the construction management contract the consulting engineer agrees to... "Manage all activities necessary for construction of a VSW facility, ... (be) responsible for the timely ordering, scheduling and expediting of all equipment ... and material necessary for construction, ... (and) be responsible for managing all construction activity at the VSW facility site..." In keeping with the intent of VSW authorizing legislation, the village agrees to provide local people to work on the VSW project to the extent they are available. The construction management contract also prescribes procedures by which the village pays construction expenses, the consulting engineer's fee, and labor costs with VSW grant funds from ADEC. To date the three design contracts have been signed and design of two of the projects is nearly complete. The Construction management contracts have also been signed. Construction at Pitkas Point and Koyukuk has begun, and construction at Beaver will start in the Spring of 1976.

The methods by which the Beaver, Koyukuk and Pitkas Point projects are being administered are unique. So far (through design) they have been very satisfactory. It is anticipated that these facilities will cost far less than if they were constructed under typical State competitive bid construction contracts.

Appendix C contains photographs to illustrate physical features of various VSW facilities.

## IV. FUTURE PROJECTS

### PLANNING

Based on the survey of village sanitation facilities done by ADEC starting in December, 1972, [villages tentatively determined to have a high priority to receive VSW projects after FY 76 are Kongiganak, Eek, Anvik, Stevens Village, Chignik Lake, Kasigluk and Nunapitchuk in that order.] That priority list was prepared over two years ago with a bare minimum of field effort since staff and funds to do a comprehensive survey have not been available.

ADEC requested additional staff and support funds for FY 76 for planning in the VSW program, and the request was recently approved by the Legislature. If a satisfactory candidate for the new VSW engineering position can be found, a planning effort as described in the following excerpts from the VSW Issue Analysis will be begun:

... "Essential to long range planning for the Village Safe Water program are estimates of how much the program will cost and a description of the schedule according to which expenditures should be made. The cursory inventory of village sanitation needs made by ADEC staff in 1973 served only to identify 32 villages with the most obvious and critical needs. [More thorough investigation is necessary to gather field data and coordinate USPHS (United State Public Health Service-Office of Environmental Health, Sanitation Facilities Construction program for Alaska natives) and VSW efforts to determine which villages should have VSW projects.] Once the villages are identified, engineering field studies must be made to serve as the basis for preliminary design of facilities and cost estimates. Then, and only then, will the capital spending needs for the VSW program be known with confidence....

... The three primary planning needs in the Village Safe Water Program are: 1) to identify those villages where VSW facilities should be installed, 2) to determine what services should be provided by each facility to be built, and 3) to establish a schedule according to which the projects are to be constructed....

... Determining what services should be provided by each VSW facility involves working closely with the village involved. Traditional bathing practices might suggest a type of bathing facility to include in the VSW plant (e.g. traditional fire bath suggests sauna bath). Raw water availability and quality will determine the water source and treatment system. Local environmental conditions greatly influence the choice of a waste treatment

and disposal system. And the size and type of building to erect, foundation requirements, heating needs, and other physical features of the intended facility are also functions of local conditions."...

## FUNDING

To date, four million dollars have been available for VSW capital construction. Those funds will be exhausted by the projects in Arctic Village, Northway, Chevak, Selawik, Alakanuk, Nulato, Beaver, Koyukuk and Pitkas Point. It is interesting to note that about three of the four million dollars were consumed by the Selawik, Alakanuk and Nulato projects.

A proposed bond bill for additional VSW capital construction funds was not passed by the 1974 Legislature. In order to make at least token progress in what ADEC considered a very worthwhile program, the Department requested two million dollars from the General Fund for FY 76. Half of that request was granted, making one million dollars available for VSW capital construction in FY 76.

Preliminary intentions based on 1972-73 planning are to offer VSW projects to the villages of Kongiganak and Eek, and perhaps Anvik depending on how much each project will cost. There may, however, be new factors or changed conditions to consider in selecting sites for the FY 76 projects.

## V. OPERATION AND MAINTENANCE

### SCOPE OF PROBLEM

Village Safe Water facilities must be adequately operated and maintained if they are to serve their intended purpose. Following are excerpts from the VSW Issue Analysis concerning operation and maintenance:

... "The legislative assignment of the Village Safe Water program is to provide safe water, sanitary means of waste disposal, bathing and laundry facilities for the inhabitants of small villages in Alaska. Funds were made available for capital construction but no provision was made for meeting long-term operation and maintenance expenses; and virtually none of the villages are capable of sustaining a facility of the type specified by the VSW Act without financial, technical and administrative assistance.

When the Department of Education called on ADEC to build VSW facilities that could provide water and waste service for new high schools, ADEC was reluctant to devote resources intended for village service to school service. But the Department of Education was willing to provide all financial and logistical support necessary for continued operation and maintenance of the VSW facilities, thus dissolving the major obstacle barring progress in the VSW program. So the decision was made to serve the schools with the village VSW facilities in return for the operation and maintenance guarantee from ADOE.

Unfortunately, the basic premise upon which the decision was made to build VSW facilities in conjunction with the high schools in Alakanuk, Selawik and Nulato got lost in the shuffle when ASOSS assumed control of the rural school capital construction program. ASOSS was reluctant to accept the responsibility for operation and maintenance which the Department of Education had previously accepted, which acceptance was the only reason ADEC had agreed to serve the schools with VSW facilities in the first place. By this time, the contracts for the joint VSW-school construction had been awarded and construction was far enough along that the projects could not be cancelled. Fortunately, ASOSS has recently agreed to provide \$6,000.00 per month for VSW water and waste service for the schools at Alakanuk and Nulato . . . .

... A facility to provide the services specified by the Village Safe Water Act must contain sophisticated equipment and appliances. Since public health is at stake, water and waste treatment systems must be kept operating properly at all times. Hence, at least one full-time, trained and paid maintenance man must attend every VSW facilities.

Virtually all of the maintenance people will have to come from the villages where VSW plants are installed because "outsiders" are

usually reluctant to take up residence in remote vilages. Since people with the training and experience necessary to operate and maintain a VSW facility are usually not available locally, an elaborate, extensive and continuing program for training of VSW plant operators is required.

A continuous and generous flow of revenue will be required to meet the operation and maintenance expenses of VSW facilities. In addition to the plant operator(s) salary, there will be treatment chemicals, electricity, fuel and replacement and repair parts to buy. Operation and maintenance expenses for just a small facility (e.g., 2 washers, 2 dryers, 2 showers, 2 rest rooms, 2 saunas, water supply and waste disposal) could run at least \$25,000 per year (1974 prices), excluding amortization of capital costs for replacement purposes. For the larger facilities being built in Alakanuk, Selawik and Nulato, operation and maintenance expenses could reach ninety to one hundred thousand dollars per year (excluding amortization).

Sources of revenue in the vilages are limited. Individuals who use the VSW facilities will pay fees, but fees cannot be so high people no longer can afford to use the facilities. Two to three thousand dollars per month might be raised through users' fees in larger vilages (400 to 500 residents) and proportionately less in smaller towns. Public health clinics, some owned by the U. S. Public Health Service and some owned by the vilages, are possible sources of revenue but not more than \$500 to \$1,000 per month. Whether or not the health clinics can be assessed that much for water and waste service has yet to be determined. Schools are also potential users of VSW water and waste service and sources of revenue. In the past, both BIA and State schools have had their own water supply and waste treatment systems, unless service from other systems was available. Most school systems, however, do not meet water supply criteria and waste disposal requirements of the State. To provide a water and waste system for a school capable of meeting State requirements could cost as much as seventy or eighty thousand dollars per year including capital, operation and maintenance costs. The actual cost at a given school would depend, of course, on such things as availability of water, environmental conditions for waste disposal, size of school, and rate of increase in replacement costs. How much a school is assessed for VSW plant service might reasonably be based on what it would cost the school to provide its own service.

In the final analysis, some minimum amount of money will have to be forthcoming every year to meet operation and maintenance expenses if VSW facilities are to serve their intended purpose. The major sources of those funds are public health clinics, schools and individual facility users. Revenue from individual users and clinics is limited to less than half the VSW facility revenue requirements. Hence, more than half the operation and maintenance costs will have to be picked up by the schools or some other source."...

VSW program involvement was minor enough in Arctic Village that responsibility for continued successful functioning of the sanitation facilities installed rests elsewhere than with ADEC.

The Chevak and Northway facilities were opened for public use early in 1974. Since then there have been damaging freeze-ups in both facilities; the Chevak facility has been periodically closed, or open for only limited use due to lack of money for fuel; and neither facility has served its intended purpose as well as it should because the necessary financial, administrative, and technical assistance has not been provided.

The Nulato facility was first opened for public use in mid-November of 1974. The operational record of this facility has been poor due mostly to the construction problems described earlier in this report. Also the VSW staff engineer has had to spend a great deal of time helping the local plant operators establish administration, management, operation and maintenance systems for the facility. That experience has clearly demonstrated the need for some means by which the villages can have access to continuing assistance in the administration, operation and maintenance of their VSW facilities. The needs for assistance at Nulato, Selawik and Alakanuk are especially critical due to the size and complexity of their facilities.

#### MEETING OPERATION AND MAINTENANCE NEEDS

The Department of Environmental Conservation requested and received \$289,000 in its FY 76 operating budget to assist eight villages with operation and maintenance of VSW facilities. Those funds were requested only as an interim provision until State policy concerning operation and maintenance of VSW facilities can be established. A major purpose of this report is to provide information which can serve as a basis for deciding how operation and maintenance support for VSW facilities might best be provided. Some alternatives listed in the VSW Issue Analysis were:

...1) a grant program to subsidize rural water and waste utility service, 2) a system of State owned and operated facilities to provide water and waste service in remote areas, 3) a utility system owned and operated by native organizations either as a service or a profit making venture (perhaps subsidized by the State), or 4) a public utility managed by a private organization perhaps controlled and subsidized by the State.

A program for operation and maintenance of VSW facilities should perhaps not be considered independent of the need for a system to insure proper operation and maintenance of rural sanitation facilities in general. In fact it might be well to consider the possibility of an operation and maintenance system for all rural utilities.

The U. S. Public Health Service (USPHS) and the Alaska Village Demonstration Project (AVDP) sponsored by the Environmental Protection Agency are the agencies other than ADEC with programs for providing rural sanitation facilities. Recognizing the need for agencies with similar missions to cooperate, ADEC intends to invite USPHS and AVDP to participate in a planning effort to arrive at a comprehensive program for rural sanitation services. [The following preliminary goal and objectives have been drawn up to guide such a planning effort:]

#### Goal

To devise a comprehensive program for achieving sanitation services in Alaskan villages:

#### Objectives

1. Inventory current efforts (who involved and description and extent of programs). ✓
2. Identify the people for whom services are being planned (i.e. the recipients). ✓
3. a. Describe sanitation functions that should be provided, if any. Examples are water supply, sewage disposal and bathing facilities. ✓  
b. Identify various feasible methods of achieving the sanitation functions described in (a) above (e.g. central watering point, individual wells, piped water service to houses, vehicle haul system). Estimate the relative costs of these methods, including installation of required physical facilities and operation and maintenance. ✓

4. Determine where resources should come from for installing facilities identified in 3-b above; categorized according to types of recipients (if any such distinctions are made) and methods of achieving sanitation functions (from 2-b above). Examples of resource sources are State government, federal government, Native organizations and local governments.
5. Determine what functional presence should be maintained for how long and by whom for the various physical facilities installed. Examples are training, management and administrative assistance, technical assistance, and operation and maintenance assistance.
6. Determine where resources should come from to achieve the functions identified in (5) above.
7. Devise major features of a comprehensive program to connect resource sources identified in (4) and (6) above with recipients.
8. Evaluate existing programs with respect to how well they contribute to achieving the comprehensive program resulting from (7) above.
9. Determine what changes in existing programs and/or new programs are needed to achieve the comprehensive program resulting from (7) above.

## VI. CONCLUSION

The Village Safe Water program grew out of recognition of the critical need for adequate sanitation services in rural Alaska. Providing rural sanitation services involves two major efforts: 1) capital construction, and 2) operation and maintenance.

### CAPITAL CONSTRUCTION

The major emphasis of the Village Safe Water Act is on construction of central sanitation facilities. Several methods of construction are authorized and ADEC is trying the various options in search of the most productive methods. With the additional staff and funding provided for FY 73, engineering planning can now be done to determine the State-wide need for VSW facilities and estimate total program costs. At least preliminary indications of the total potential scope of VSW capital construction needs should be available by the end of FY 76.

### OPERATION AND MAINTENANCE

Construction of any utility system, especially in the relatively harsh environment of rural Alaska, is money wasted unless provisions are made for the system to be properly operated and maintained. Most, if not all villages qualifying for VSW projects lack the necessary resources to administer, manage, operate and maintain even a minimum VSW facility (or any other utility system) without continuing outside assistance.

The Village Safe Water Act contains only brief mention of operation and maintenance assistance for villages which receive VSW facilities. To date the State does not have a firm policy position on how to provide for VSW operation and maintenance. Some of the options to be explored (mentioned earlier in this report) have already become apparent in the few years the VSW

program has been in existence. More such options and a better view of their advantages and disadvantages should result from the planning effort by VSW staff scheduled for FY 76. Perhaps it is reasonable to set the end of FY 76 as the time by which the State can establish policy concerning VSW operation and maintenance. Until then ADEC has funds to help villages manage, operate and maintain their VSW facilities.



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## VSW ISSUE ANALYSIS

### OBJECTIVES

The specific objectives of this analysis are to:

- 1) Present a generalized summary of activities in the VSW program from its inception to the present.
- 2) Describe problems with operation and maintenance of VSW facilities and investigate possible solutions.
- 3) Analyze experience to date with joint capital construction projects involving VSW facilities and state schools.
- 4) Describe the planning and budgeting needs of the VSW program and suggest how they might be met.
- 5) Present criteria used for assigning priorities to villages eligible for VSW projects.
- 6) Suggest appropriate arrangements with federal and other state agencies to facilitate planning for VSW facilities.

## SUMMARY AND CONCLUSIONS

### SUMMARY

The Village Safe Water program is intended to provide safe water, waste disposal, bathing and laundry facilities in villages (less than 600 inhabitants) in Alaska. Since its inception in 1970, the program has been involved in five capital construction projects, three of which are joint projects with State-Operated high schools.

The Alaska Department of Environmental Conservation (ADEC) has been reluctant to build VSW facilities in villages where provisions cannot be made for revenue to operate and maintain them. Most villages are not capable of sustaining even a minimal facility without outside assistance, and there is not enough money in the VSW program itself to provide continuing support. The three joint projects with schools were entered into only because the Department of Education (ADOE) agreed to operate and maintain the VSW facilities in return for water and waste service for the schools. Since the Alaska State-Operated School System (ASOSS) gained jurisdiction over the schools, it has been reluctant to honor the Department of Education commitment but has recently agreed to do so.

Joint construction means having two or more capital projects (e.g., a VSW facility and a State school) built by one contractor under one contract. The three joint construction projects involving VSW facilities and ASOSS schools have been immensely problematic. This does not mean VSW facilities should not be built to serve State schools, but rather that troublesome construction procedures should be amended. The facilities have cost more than twice what was

anticipated by ADEC and the projects have had to be scaled down due to exorbitant costs. The consulting engineers and architects did less than satisfactory work on the projects, the contract documents contained costly errors and omissions, and communications among all parties concerned have been muddled at best. One cause of these problems was the time limit imposed by ADOE for preparation of the projects for contracting and construction.

ADEC policy has been not to build VSW projects in villages where U. S. Public Health Service (USPHS) sanitation facilities have been or are to be installed. Hence, VSW program planning is greatly influenced by USPHS planning for construction of water distribution and waste collection and disposal systems. USPHS finds it difficult to project a reliable schedule for construction projects, making it difficult to plan VSW projects accordingly.

Financial requirements of the VSW program cannot be determined until: 1) an extensive survey is made of sanitation services in all villages, 2) USPHS intentions are known with confidence, and 3) villages qualified for VSW program assistance are identified. Once the villages are identified, investigation must be made to determine what facilities should go in each village, engineering data must be gathered, and preliminary design be done in advance of budgeting for capital construction projects, but adequate money and staff have not been available to do those things.

The VSW program can provide badly needed sanitation services to people in rural Alaska, and for the State to have such a constructive program is commendable. Administrative problems analyzed in this report are perhaps no more than might be expected for a new program virtually without precedent. The issue analysis procedure will have served its intended purpose if problems in the VSW program,

openly discussed in this analysis, are recognized by appropriate parties and constructive solutions (some of which are suggested herein) are worked out.

#### CONCLUSIONS

- 1) Current policy for the VSW program is to build central sanitation facilities only in villages where dependable provisions can be made for continuing and successful operation and maintenance. Since such provisions are difficult, if not impossible, to make in most Alaskan villages, inter-agency planning is necessary to establish long term policy for providing rural water and waste facilities.
- 2) Advance planning money and staff are necessary to determine needs to be met by the VSW program and the cost of meeting those needs.
- 3) The question of whether or not joint capital construction is the best approach for rural State projects has not been resolved. There is evidence in the VSW program that joint construction might not be the best procedure. Alternative means of constructing VSW facilities (and perhaps other State facilities as well) should be tried. Alternatives to having the Division of Buildings administer all rural capital construction projects should also be tried.
- 4) When a program is transferred from one agency to another (e.g., rural schools from ADOE to ASOSS), provision must be made to insure commitments made under the program previous to the transfer will be honored.
- 5) Village Safe Water facilities can provide sanitation services for village residents and state schools for far less than the cost of serving only the

villagers with VSW facilities and providing separate sanitation systems for the schools.

- 6) The State can provide essential and laudible services to rural Alaskans through the VSW program. Every effort should be made to solve the procedural problems involved in getting VSW facilities built and to adequately fund the program.

#### BACKGROUND

The Village Safe Water (VSW) Act of 1970 (AS 46.07.010-.020) calls for the State of Alaska to install "at least one facility for safe water and hygienic sewage disposal in each village". The Department of Health and Social Services (ADHSS) was originally charged with carrying out the program. In 1971, a segment of ADHSS was transferred to the Department of Environmental Conservation (ADEC) which was created by the legislature July 1, 1971. VSW activities were carried on mostly within the new department and in May of 1973, ADHSS and ADEC signed a letter of understanding which essentially turned the VSW program over to ADEC. A copy of the letter of understanding is attached to this analysis.

Voters approved a three million dollar bond issue in 1970 to fund the VSW program and another one million dollar bond issue in 1972. Little progress was made in the program, however, until December, 1972 for the following reasons: 1) no money was available to administer the program until October, 1972 and even when the VSW staff position became available, a person suitable to fill it could not be found; and 2) no provision had been made for funds to operate and maintain VSW facilities and ADEC was reluctant to construct facilities without assurance they would operate properly.

In December, 1972, a member of the ADEC staff began a survey of sanitation facilities in small villages throughout Alaska (most of which are native villages) to determine which villages were most in need of VSW projects. Letters were written to government agencies (e.g., the United States Public Health Service and the Bureau of Indian Affairs), native associations (e.g., regional corporations and health corporations) and other organizations with knowledge of village sanitation problems, requesting information and suggestions concerning plans for VSW projects. As a result of this study, 32 villages were identified as being most in need of the sanitation services specified by the VSW Act. Meanwhile, in late 1972 and early 1973, the villages of Northway and Chevak requested assistance under the VSW program in finishing central facilities they had begun to construct on their own initiative. Since Northway and Chevak had committed their own resources and thus demonstrated a sincere desire to improve sanitation in the villages, they were granted assistance. Then in early 1973, the Department of Education, lacking funds to provide water and waste service for new schools scheduled for construction in remote villages in 1973-74, asked ADEC to install VSW facilities in Alakanuk, Selawik and Nulato to provide sanitation services for the new schools to be built there in addition to providing sanitation services for the villages. ADEC agreed to do so provided the Department of Education would agree to provide all funds and logistical support necessary for continued operation and maintenance of the VSW facilities. Agreements were drawn up and signed by ADEC and the Department of Education specifying the conditions under which the VSW facilities were to be constructed and operated in Nulato and Selawik (see attached copies). Before the Alakanuk agreement got signed, the rural school capital construction program was transferred from ADOE to the Alaska State-Operated School System (ASOSS) and ASOSS assumed responsibility from the Department of Education for the schools to be built in Alakanuk, Selawik and Nulato. In addition, the Selawik school will

be managed as an independent school district starting July 1, 1974. Hence, there has been some confusion and some discord about who should be responsible for operation and maintenance of the VSW facilities being built in conjunction with ASOSS high schools.

Five villages are receiving major central sanitation facilities construction projects under the VSW program (Northway, Chevak, Alakanuk, Selawik and Nulato). In addition, Arctic Village was granted a few thousand dollars to buy washing machines and dryers to install in a facility constructed by the U. S. Public Health Service. Total expenditure in the six villages will be approximately three million dollars, leaving about one million dollars for additional projects.

#### DEFINITION OF PROBLEMS

##### OPERATION AND MAINTENANCE

The legislative assignment of the Village Safe Water program is to provide safe water, sanitary means of waste disposal, bathing and laundry facilities for the inhabitants of small villages in Alaska. Funds were made available for capital construction but no provision was made for meeting long-term operation and maintenance expenses; and virtually none of the villages are capable of sustaining a facility of the type specified by the VSW Act without financial, technical and administrative assistance.

When the Department of Education called on ADEC to build VSW facilities that could provide water and waste service for new high schools, ADEC was reluctant to devote resources intended for village service to school service. But the Department of Education was willing to provide all financial and logistical

support necessary for continued operation and maintenance of the VSW facilities, thus dissolving the major obstacle barring progress in the VSW program. So the decision was made to serve the schools with the village VSW facilities in return for the operation and maintenance guarantee from ADOE.

Unfortunately, the basic premise upon which the decision was made to build VSW facilities in conjunction with the high schools in Alakanuk, Selawik and Nulato got lost in the shuffle when ASOSS assumed control of the rural school capital construction program. ASOSS was reluctant to accept the responsibility for operation and maintenance which the Department of Education had previously accepted, which acceptance was the only reason ADEC had agreed to serve the schools with VSW facilities in the first place. By this time, the contracts for the joint VSW-school construction had been awarded and construction was far enough along that the projects could not be cancelled. Fortunately, ASOSS has recently agreed to provide \$6,000.00 per month for VSW water and waste service for the schools at Alakanuk and Nulato.

#### JOINT CONSTRUCTION

Joint capital construction refers to the construction of two or more separate projects by one contractor under one contract. Joint capital construction should not be confused with the cooperative venture of having other State facilities like schools receive sanitation services from VSW facilities.

One purpose of this issue analysis is to investigate the assumption it is cheaper to construct capital facilities in remote Alaskan villages simultaneously and under the same contract whenever possible. The VSW projects and State high schools in Alakanuk, Selawik and Nulato were expected to cost less by joint con-

struction than if they were built under individual contracts. So far, the VSW facilities are costing more than twice what was originally estimated by the architectural and engineering consultants retained by the Department of Public Works, Division of Buildings; and the facilities themselves have been scaled down.

#### PLANNING AND BUDGETING

The Village Safe Water Act calls for safe water, sanitary waste disposal, bathing and laundry facilities in every village in Alaska. But VSW facilities need not be installed in all villages because the U. S. Public Health Service (USPHS) is charged with providing sanitation facilities in native villages. Hence, intentions of the federal program are very important in VSW program planning. Unfortunately, the USPHS priority list and plans for sanitation facilities construction projects vary greatly from year to year, making it difficult to plan VSW projects accordingly. To make matters worse, the USPHS has recently been directed to devote most of its sanitation facilities construction effort to serving new housing projects. Virtually the entire program thus becomes subject to the dubiety of rural housing construction programs in Alaska.

Essential to long range planning for the Village Safe Water program are estimates of how much the program will cost and a description of the schedule according to which expenditures should be made. The cursory inventory of village sanitation needs made by the ADEC staff in 1973 served only to identify 32 villages with the most obvious and critical needs. More thorough investigation is necessary to gather field data and coordinate USPHS and VSW efforts to determine which villages should have VSW projects. Once the villages are identified, engineering field studies must be made to serve as the basis for

preliminary design of facilities and cost estimates. Then, and only then,  
will the capital spending needs of the VSW program be known with confidence.

#### ANALYSES

#### OPERATION AND MAINTENANCE

A facility to provide the services specified by the Village Safe Water Act must contain sophisticated equipment and appliances. Since public health is at stake, water and waste treatment systems must be kept operating properly at all times. Hence, at least one full-time, trained and paid maintenance man must attend every VSW facility.

Virtually all of the maintenance people will have to come from the villages where VSW plants are installed because "outsiders" are usually reluctant to take up residence in remote villages. Since people with the training and experience necessary to operate and maintain a VSW facility are usually not available locally, an elaborate, extensive and continuing program for training of VSW plant operators is required.

A continuous and generous flow of revenue will be required to meet the operation and maintenance expenses of VSW facilities. In addition to the plant operator(s) salary, there will be treatment chemicals, electricity, fuel and replacement and repair parts to buy. Operation and maintenance expenses for just a small facility (e.g., 2 washers, 2 dryers, 2 showers, 2 rest rooms, 2 saunas, water supply and waste disposal) could run at least \$25,000 per year (1974 prices), excluding amortization of capital costs for replacement purposes. For the larger facilities being built in Alakanuk, Selawik and Nulato, operation

and maintenance expenses could reach ninety to one hundred thousand dollars per year (excluding amortization).

Sources of revenue in the villages are limited. Individuals who use the VSW facilities will pay fees, but fees cannot be so high people no longer can afford to use the facilities. Two to three thousand dollars per month might be raised through users' fees in larger villages (400 to 500 residents) and proportionately less in smaller towns. Public health clinics, some owned by the U. S. Public Health Service and some owned by the villages, are possible sources of revenue but no more than \$500 to \$1,000 per month. Whether or not the health clinics can be assessed that much for water and waste service has yet to be determined. Schools are also potential users of VSW water and waste service and sources of revenue. In the past, both BIA and State schools have had their own water supply and waste treatment systems, unless service from other systems was available. Most school systems, however, do not meet water supply criteria and waste disposal requirements of the State. To provide a water and waste system for a school capable of meeting State requirements could cost as much as seventy or eighty thousand dollars per year including capital, operation and maintenance costs. The actual cost at a given school would depend, of course, on such things as availability of water, environmental conditions for waste disposal, size of school, and rate of increase in replacement costs. How much a school is assessed for VSW plant service might reasonably be based on what it would cost the school to provide its own services.

In the final analysis, some minimum amount of money will have to be forthcoming every year to meet operation and maintenance expenses if VSW facilities are to serve their intended purpose. The major sources of those funds are public

health clinics, schools and individual facility users. Revenue from individual users and clinics is limited to less than half the VSW facility revenue requirements. Hence, more than half the operation and maintenance costs will have to be picked up by the schools or some other source. The schools are understandably reluctant to commit large amounts of education funds to water and waste service. But such service is as essential to a school as its heating system or roof; and that service must be provided by the school if a VSW facility is not to serve the school. According to estimates done by ADEC, the annual cost (amortization of capital construction plus operation and maintenance) for a school to have its own water and waste system is eighty percent or more of the total annual operation and maintenance costs for a VSW facility serving both the school and the village. Hence, even if the schools agree to pay all operation and maintenance expenses for VSW facilities, the State would be providing adequate water and waste systems for its schools, and sanitation facilities in villages for only about twenty percent more than it would cost to provide water and waste service for the school alone. Capital costs of VSW facilities is not included in the above cost comparisons for school water and waste service because the VSW facilities would be built to serve the villages regardless of school participation. Schools would probably not have to meet all operation and maintenance expenses for VSW facilities anyway, because some revenue will be generated by villagers using the facilities and perhaps USPHS clinics and other users.

It is obvious that inter-agency planning needs to be done concerning water and waste utilities in remote villages. Some of the questions that need answers are: How will operation and maintenance of VSW facilities be provided for? Where will operation and maintenance revenue come from? How can rural schools

best be provided water and waste service? What agency should administer State capital and operation and maintenance funds? Should the VSW program provide water and waste service in remote villages on a continuing basis (including periodic replacement of facilities as required); and if so, should the program be given the relative permanence of general fund support as opposed to dependence on bond elections?

Some alternatives to consider are: 1) a grant program to subsidize rural water and waste utility service, 2) a system of State owned and operated facilities to provide water and waste service in remote areas, 3) a utility system owned and operated by native organizations either as a service or a profit making venture (perhaps subsidized by the State), or 4) a public utility managed by a private organization perhaps controlled and subsidized by the State.

#### JOINT CONSTRUCTION

Whether or not it is more efficient to construct two or more State capital projects jointly (one contract) in a remote village than to build them separately is not an easy question. At first blush, one might think it obvious joint projects would be cheaper since contractor mobilization costs should be less and one large contract should be cheaper to administer than two or more smaller ones. Experience, however, has not given unqualified support to that thesis.

Experience with joint construction in the VSW program is limited to the three projects in Alakanuk, Selawik and Nulato. They have been very unsatisfactory projects from ADEC's point of view in that they have cost double what

was anticipated, the facilities had to be scaled down as costs became exhor- tant, and monitoring the contract procedure became virtually impossible. The causes of these problems are many and complex. Perhaps among them are: 1) the jobs were big and complex enough that including them in one contract was un- wieldy, 2) the consulting engineers and architects did less than satisfactory work, 3) the contract documents were poorly and incompletely done, 4) ADEC did not exert enough control over work done by the consulting engineers and architects, 5) the Division of Buildings did not (perhaps due to lack of time and expertise) critically monitor work prepared by the consulting engineers and architects, and 6) ADOE imposed a severe time limit on time available to prepare the projects for construction.

The major and perhaps root cause of the many problems with the three projects was lack of time for adequate design and contract preparation. The consulting engineers and architects claim they did not have time to do the kind of job they would like to have done. On the other hand, in preliminary negotiations with the consultants about doing the jobs, they indicated the limited time would be "no problem". The Division of Buildings might have been expected to notice the inadequacies in the consultant's work, but they claim not to have had time to review the work properly. Lack of expertise may also have been a factor. Per- haps ADEC should have kept closer track of work done by the consultants; but being insulated from the consultants, contracts and contractors by the Division of Buildings made communication and effective participation difficult.

Joint construction may be just too difficult to organize and administer (at least for certain types of projects) given State construction procedures. On the other hand, ADEC's disappointing experience in joint construction may

be due to causes not attributable to joint construction per se. Perhaps some future VSW projects should be built with ADEC managing consultants and contracts directly to see if that method has advantages. Another possibility is force account work, managed either by ADEC or the Division of Buildings.

## PLANNING AND BUDGETING

### Planning

The three primary planning needs in the Village Safe Water Program are:

- 1) to identify those villages where VSW facilities should be installed, 2) to determine what services should be provided by each facility to be built, and
- 3) to establish a schedule according to which the projects are to be constructed.

The Village Safe Water Act clearly calls for water supply, waste disposal, laundry and bathing facilities in every village with between 25 and 600 inhabitants in Alaska. Ostensibly, the USPHS has the similar mission of providing water distribution and waste collection and disposal systems in native villages in Alaska. USPHS usually installs relatively elaborate systems to provide running water and sewage disposal service to each house. Since the USPHS systems are usually more desirable than VSW facilities both for public health reasons and from the villages' standpoint, it seems reasonable to plan VSW projects only where USPHS systems have not been and perhaps will not be installed. If the USPHS really does intend to provide water and waste disposal services in all native villages, the VSW program's purpose is only to provide interim sanitation services until the USPHS mission is accomplished. But if some villages are destined never to receive USPHS projects, VSW program planning is greatly influenced by the dependability of USPHS planning.

Determining what services should be provided by each VSW facility involves working closely with the village involved. Traditional bathing practices might suggest a type of bathing facility to include in the VSW plant (e.g., traditional fire bath suggests sauna bath). Raw water availability and quality will determine the water source and treatment system. Local environmental conditions greatly influence the choice of waste treatment and disposal system. And the size and type of building to erect, foundation requirements, heating needs, and other physical features of the intended facility are also functions of local conditions.

A critical factor in deciding what services to provide is the village's ability to operate and maintain the facility. More services require more extensive facilities which are more difficult and expensive to operate and maintain. Most villages are currently unable to support even a minimal water supply and bathing center without participation by schools or outside assistance. State schools and village residents can both be provided sanitation services from VSW facilities cheaper than if the villagers have VSW facilities and the schools have separate sanitation systems. Hence, financial participation by State schools in operation and maintenance of VSW facilities is desirable unless some other form of assistance is made available. In no case should a VSW facility be built unless and until dependable provisions have been made to operate and maintain it.

Scheduling the construction of VSW projects involves prioritizing the projects according to some set of criteria. The system used so far by ADEC is described later in this report.

#### Budgeting

Funding decisions concerning the VSW program must be based on knowledge

of the program's mission. If one-time capital construction facilities for an identified number of villages is the intent, the VSW program is finite. After the qualified villages have been identified, preliminary engineering investigations and design could be done to serve as the basis for cost estimates, and total cost of the program would be known. If continuing provision of sanitation services in some number of qualified villages is the intent, the VSW program is continuous and includes involvement in operation, maintenance and replacement of facilities.

A great deal of time and money is required to make the preliminary engineering field investigations and designs essential for accurate cost estimations, and dependable cost estimates for the VSW and every other State program are absolutely essential in planning State services and making state budget decisions. All too often ADEC and most other State agencies are asked for spur-of-the-moment cost estimates for capital construction projects. Such estimates can be correct only by coincidence, and they do more harm than good when appropriations based on them prove inadequate. Advance planning money must be provided so preliminary engineering and cost estimates can be done before budgeting. ASOSS was recently authorized a \$400,000.00 advance planning revolving fund for planning capital projects. The VSW program would benefit greatly from a similar fund.

#### PRIORITY CRITERIA

To date there has been little need for priority criteria for VSW projects. Staff and money have not been available to identify villages qualified for and in need of VSW assistance, so there is little to prioritize. Thirty-two villages were identified as being in critical need of a safe water source, but much

more study and coordination is necessary to determine which villages should receive VSW assistance and the extent of each facility.

In general, only villages in most critical need of a safe water supply have been considered for VSW projects. Also important is the village's ability to operate and maintain facilities installed, either unassisted or through arrangements with a school, PHS clinics or other sources of revenue.

Nearly three-fourths of the VSW program's bond money was used for the three joint projects with ASOSS high schools. Those projects were chosen less according to VSW priority criteria than in response to Department of Education pleas and expressed willingness to operate and maintain the finished facilities. Remaining money will be devoted to three or four villages where water supply needs are critical and schools and clinics can provide revenue for operation and maintenance.

#### INTER-AGENCY COORDINATION

Coordination of VSW program planning with planning for USPHS sanitation facilities projects is vital. The relationship between the two programs was described earlier. ADEC has recently taken the initiative in establishing a routine by which USPHS and ADEC can communicate more openly and coordinate planning for village sanitation projects more fully. Copies of correspondence concerning this initiative are attached to this report.

Coordination of VSW program capital construction with other State capital construction projects may or may not be imperative depending on whether or not joint construction is judged desirable for rural capital projects. The assump-

tion that joint construction is desirable is made questionable by experience in the VSW program. If the problems with joint construction can be overcome, the obvious center for coordination of projects should be the agency administering the joint ventures--probably the Division of Buildings. Coordinating and programming all State rural capital construction projects would be a massive task, however, to say nothing of managing the joint projects themselves.

Further direction for inter-agency coordination will be pointed out if and when the questions posed earlier in this report and requiring the attention of inter-agency planning are answered. Coordination with AVEC might allow VSW facilities to make use of waste heat from power generators. Other State installations (e.g., road maintenance shops, airfield maintenance shops and Fish and Game projects) might be coordinated with the VSW program to receive water and waste services.

#### THE BRIGHT SIDE

The purpose of an issue analysis is to focus on the problems in a program. But many things are right about the VSW program. There is a desperate need for sanitation services in Alaskan villages; and VSW facilities, despite past problems with getting them built, can help satisfy that need. Village schools face critical water supply and waste disposal problems which VSW facilities could help solve. The relatively unspoiled and often fragile natural environment of rural Alaska must be protected from the insults of improper disposal methods for human wastes. VSW facilities offer that protection.

The VSW program is new and virtually without precedent. The growing pains described in this analysis are perhaps part of the experience out of which can grow an efficient and popular service by the State.

LETTER OF UNDERSTANDING

This letter of understanding is entered into this \_\_\_\_\_ day of May 1973 between the Department of Health and Social Services and the Department of Environmental Conservation. The terms of this letter of understanding are as follows:

1. The Department of Environmental Conservation agrees to do all planning and engineering with regard to Village Safe Water Act facilities.
2. The Department of Health and Social Services agrees to approve all planning and engineering by the Department of Environmental Conservation and the expenditures of all funds made by the Department of Environmental Conservation for Village Safe Water Act facilities.
3. The Department of Environmental Conservation agrees to accept all responsibility for Village Safe Water Act facilities.-

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Frederick P. McGinnis  
Commissioner  
Department of Health and  
Social Services

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Max C. Brewer  
Commissioner  
Department of Environmental  
Conservation

AGREEMENT CONCERNING VILLAGE SAFEWATER

ACT FACILITY AT SELAWIK, ALASKA

This agreement is made and entered into this 29 day of June, 1973 between the Department of Environmental Conservation, State of Alaska, the Department of Health and Social Services, State of Alaska, the Department of Education, State of Alaska, and the City of Selawik, Selawik, Alaska, for the purpose of providing for the construction and the continued operation and maintenance of a Village Safewater Act (AS 46.07.010 - .080) facility at Selawik, Alaska. The terms of the agreement are as follows:

1. The Department of Environmental Conservation and the Department of Health and Social Services agree to provide the capital funds necessary to construct a Village Safewater Act facility at Selawik, Alaska, in conjunction with the construction of the high school facility of the Department of Education at Selawik, Alaska.

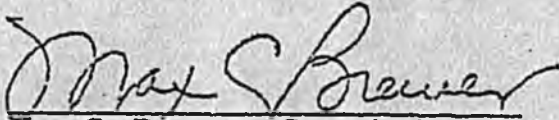
2. The City of Selawik agrees to be responsible for the operation and maintenance of the Selawik Village Safewater Act facility constructed in accordance with this agreement.

3. The Department of Environmental Conservation, the Department of Health and Social Services and the Department of Education agree to encourage the City of Selawik to develop, adopt and enforce an ordinance requiring the members of the community to take their garbage to the incinerator and their chemical toilet wastes and honey bucket wastes to the sewage treatment plant located in the Selawik Village Safewater Act facility.

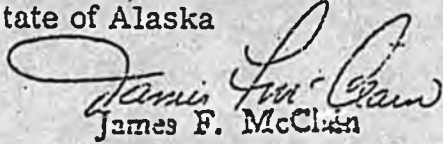
4. The Department of Environmental Conservation, the Department of Health and Social Services and the Department of Education agree to

encourage the City of Selawik to adopt a fee schedule for the use of the Selawik Village Sewerage Act facility, the revenues of which will be used to replace such items as washing machines and dryers as necessary.

Agreed to this 27 day of June, 1973.

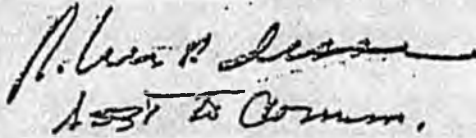


Max C. Brewer, Commissioner  
Department of Environmental Conservation  
State of Alaska

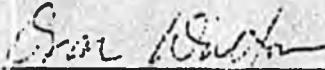


Acting Deputy Commissioner

Frederick P. McGinnis, Commissioner  
Department of Health and Social Services  
State of Alaska



Marshall L. Lind, Commissioner  
Department of Education  
State of Alaska



Oran Walton, Mayor  
City of Selawik

AGREEMENT CONCERNING THE OPERATION AND  
MAINTENANCE OF THE VILLAGE SAFEWATER  
ACT FACILITY AT SELAWIK, ALASKA

This agreement is made and entered into this 29 day of  
June, 1973 between the City of Selawik and the Department  
of Education, State of Alaska. The terms of the agreement are as follows:

1. The City of Selawik agrees to permit use of the Village Safewater  
Act facility to be located at Selawik, Alaska, by the schools of the Department  
of Education at Selawik, Alaska.

2. The Department of Education agrees to provide to the City of  
Selawik all funds and logistical support necessary for the continued operation  
and maintenance of the Village Safewater Act facility at Selawik. Operation  
and maintenance includes all repairs whether minor or major in nature.  
However, repair does not include re-construction of the Selawik Village  
Safewater Act facility if such facility is substantially or entirely destroyed.

Agreed to this 29 day of June, 1973.

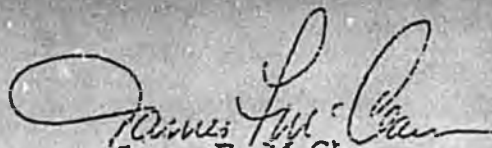
*M. L. Lind*  
Asst. to Comm.

*for*  
Dr. Marshall L. Lind, Commissioner  
Department of Education  
State of Alaska

*Oran Walton*  
Oran Walton, Mayor  
City of Selawik


Approved to this 12<sup>th</sup> day of July, 1973.

*Max C. Brewer*  
Dr. Max C. Brewer, Commissioner  
Department of Environmental Conservation  
State of Alaska

  
James F. McClain

Acting Deputy Commissioner

*for* Frederick P. McGinnis, Commissioner  
Department of Health and Social Services  
State of Alaska

  
Jonas Ramoth, President  
Selawik Advisory School Board

AGREEMENT CONCERNING VILLAGE SEWAGE  
ACT FACILITY AT NULATO, ALASKA

This agreement is made and entered into this 17<sup>th</sup>  
day of February, 1973 between the Department of Environ-  
mental Conservation, State of Alaska, the Department of Health  
and Social Services, State of Alaska, the Department of  
Education, State of Alaska, and the City of Nulato, Nulato,  
Alaska, for the purpose of providing for the construction and  
the continued operation and maintenance of a Village Sewage  
Act (AS 46.07.010 - .080) facility at Nulato, Alaska. The  
terms of the agreement are as follows:

1. The Department of Environmental Conservation and  
the Department of Health and Social Services agree to provide  
the capital funds necessary to construct a Village Sewage  
Act facility at Nulato, Alaska, in conjunction with the con-  
struction of the high school facility of the Department of Edu-  
cation at Nulato, Alaska.

2. The City of Nulato agrees to be responsible for  
the operation and maintenance of the Nulato Village Sewage  
Act facility constructed in accordance with this agreement.

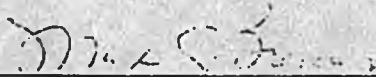
3. The Department of Environmental Conservation, the  
Department of Health and Social Services and the Department of  
Education agree to encourage the City of Nulato to develop,  
adopt and enforce an ordinance requiring the members of the  
community to take their garbage to the incinerator and their  
chemical toilet wastes and honey bucket wastes to the sewage  
treatment plant located in the Nulato Village Sewage Act  
facility.

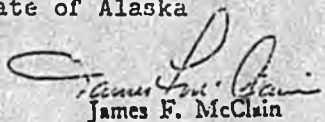
4. The Department of Environmental Conservation, the  
Department of Health and Social Services and the Department of  
Education agree to encourage the City of Nulato to adopt a fee  
schedule for the use of the Nulato Village Sewage Act

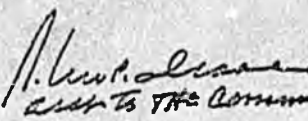
ATTORNEY GENERAL, STATE OF ALASKA  
STATE CAPITOL  
PO BOX 11, JUNEAU, ALASKA  
PHONE 586-5391

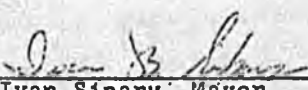
1 facility, the revenues of which will be used to replace such  
2 items as washing machines and dryers as necessary.

3 Agreed to this 11<sup>th</sup> day of July, 1973.

4  
5   
6 Dr. Max C. Brewer, Commissioner  
7 Department of Environmental Conservation  
8 State of Alaska

9   
10 James F. McClain  
11 Acting Deputy Commissioner  
12 Frederick P. McGinnis, Commissioner  
13 Department of Health and Social Services  
14 State of Alaska

15   
16 Dr. Marshall L. Lind, Commissioner  
17 Department of Education  
18 State of Alaska

19   
20 Ivan Sipary, Mayor  
21 City of Nulato

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STATE OF ALASKA  
TODUCHIK, JUNEAU, ALASKA  
PHONE 586-5331

April 23, 1974

Mr. Edmund S. Jacobsen  
Sanitary Engineering Director  
U.S. Public Health Service  
P.O. Box 7-741  
Anchorage, Alaska 99510

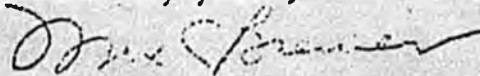
Dear Mr. Jacobsen:

Long range planning for the Village Safe Water Program is currently being done in the Alaska Department of Environmental Conservation. The purposes of the planning are to identify communities where Village Safe Water facilities should be built, determine what services should be included in those facilities, and estimate their costs.

Critical factors in deciding where Village Safe Water projects will be located are past activities and future plans of your Sanitation Facilities Construction program. We feel the water distribution and waste collection and treatment systems installed by your agency are highly desirable in any community for which they are feasible. Hence those villages intended to receive a Public Health Service project are not likely to be considered for the centralized facilities authorized by the Village Safe Water Act.

In short, our planning is greatly dependent on your planning. I suggest: our agencies get together soon to discuss and work out a cooperative and continuing planning procedure whereby our individual efforts to provide remote sanitation facilities can be clearly defined and programmed. Please let me know your reaction to this proposal and feel free to suggest a time, place, and format.

Sincerely yours,



Max C. Brewer  
Commissioner

cc: Brewer  
Cherry  
Lacey  
Linnard  
Sargent



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
PUBLIC HEALTH SERVICE  
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

*Handwritten:* Sargent

*Handwritten:* File - PHS

ALASKA AREA NATIVE HEALTH SERVICE  
BOX 7-541  
ANCHORAGE, ALASKA 99510

May 1, 1974

Refer to: A-OEH

Dr. Max C. Brewer, Commissioner  
Dept. of Environmental Conservation  
Pouch "O"  
Juneau, Alaska 99801

Dear Max:

I was glad to receive your letter of April 23, suggesting a planning meeting to coordinate our efforts in the various villages in Alaska.

I would like to suggest a meeting in Anchorage. The time could be arranged to coincide with some trip you have to make to Anchorage. Just let us know about a week in advance and we'll arrange to be available.

I would suggest that the meeting be quite informal. First you or your staff could present your program and explain the limitations or constraints of the operation; then someone from our office could explain our program and the limitations imposed by our operating policies. A discussion of possible joint effort and each agency's construction schedule would follow from this.

Let us know when you will be able to meet or if you have any other suggestions.

Sincerely,

Edmund S. Jacobsen, P.E.  
Sanitary Engineer Director  
Chief, Office of Environmental  
Health

vz

May 22, 1974

Edmond S. Jacobsen  
Chief, Office of Environmental Health  
Alaska Area Native Health Service  
P.O. Box 7-741  
Anchorage, Alaska 99510

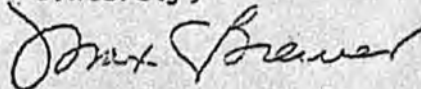
Dear Mr. Jacobsen:

Your recent encouragement of a meeting to discuss coordination of our rural sanitation facilities programs is gratifying. As was pointed out in my last letter, we would like to avoid spending Village Safe Water Act funds in villages where water distribution and waste disposal systems have been or soon will be built by your agency. Hence the coordination I speak of is less in the form of joint projects and more in terms of establishing a procedure to insure mutual understanding of the year by year intentions of our two agencies.

I suggest we schedule semi-annual meetings to be held alternately in Juneau and Anchorage. At these meetings you or members of your staff could describe your most current plans for sanitation facilities projects, and I or members of my staff could do the same for Village Safe Water projects. These meetings would at least improve communications between our agencies and help avoid conflict in our rural activities.

Let me know what you think of my suggestions. If you agree with the intent, perhaps we can schedule a meeting to discuss details in the near future.

Sincerely,



Max C. Brewer  
Commissioner

MCB:JWS:lt  
bc: Cherry  
Lowery  
Scribner

RECEIVED

JUN 28 1974

BUDGET &amp; MANAGEMENT

TO:  M.R. Charney, Director  
Division of Budget & Management  
Department of Administration

DATE : June 25, 1974

FROM: Buel A Taggart  
Commissioner  
Department of Public Works

SUBJECT: FY 76 Issue Analysis Village  
Safe Water Projections  
131-1-03 P

We are submitting the following analysis on the issue of Village Safe Water Projection, prepared by the Division of Buildings, Department of Public Works.

Summary and Conclusions

The Village Safe Water Act of 1970 (as 46.07) provides that safe water and sewage disposal shall be provided to villages in the State.

Program costs could be reduced by developing a more efficient design utilizing prefab construction methods, or purchasing prefab modules or trailers.

The Department of Public Works suggests that the program be implemented similarly to the matter it has in the past. Cooperating with other State agencies. The buildings and their contents would be designed in Alaska by Alaskan engineers and architects.

Problem Definition

The basic problem in implementing this program is developing a satisfactory design that will satisfy the Department of Environmental Conservation's requirements, and be economical to operate.

Objectives

The objectives of this issue analysis are (1) to establish criteria for a basic or standard Safe Water Facility design satisfying the requirements of the Department of Environmental Conservation, fill the requirements of the villages where the facility will be used, be economical to construct, and will adequately function with only minimum maintenance; (2) to develop guidelines for implementing a training program of adequate scope to successfully educate one or two persons in each village to perform maintenance on the structure and its associated equipment and (3) to establish a source of revenue adequate to carry out all the required activity.

Alternatives

Criteria for developing a basic or standard design for a Safe Water Project may be determined from the following information.

- Results of a subsurface site investigation & permafrost
- Availability of water on site
- The quality of the water on the site
- The types of sewage disposal already in use by local residents
- The methods used by residents to transport garbage and refuse
- The population to be served by the facility
- The projected increase or decrease in population to be served
- The ability of the community served to own and operate the facility
- Funds available for the project

Developing guidelines for a training program may be obtained by the following methods:

- Research other training programs used by other Departments, such as the Department of Labor or the Department of Education
- Make inquiries into training programs that other States have developed
- Investigate the possibility of the contractor training two or more people to operate and maintain the facility

Major Constraints

The major constraints involving the Village Safe Water Projects are:

- a) The climatological extremes that are found in the State with the usual underground conditions, such as seasonal frost and permafrost, make designing a low-cost structure very improbable.
- b) Most villages where a Safe Water Facility will be located are in areas where subsurface soil conditions will be a problem, and construction costs will be high.
- c) The majority of the future Safe Water Facilities will be located in villages having very little, if any, source of revenue.

TWO

REPORT OF THE TASK FORCE ON  
REMOTE VILLAGE WATER FOR  
THE ALASKA WATER  
ASSESSMENT

TASK FORCE MEMBERS:

- Jerry Sargent (Chairman) - Alaska Department of Environmental Conservation
- Bill Ryan - Alaska Native Health Service
- Dave Gray - Representing the Alaska Federation of Natives
- Larry Kimball - Alaska Department of Community and Regional Affairs

Juneau, Alaska

June 25, 1976

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## REMOTE VILLAGE WATER

### INTRODUCTION

In late April of 1976 the chairman of the Alaska Water Study Committee (AWSC) called a meeting at which the chairman of the problem information task force on remote village water was identified, and the general objectives of the task force were given. Time budgeted for the task force to make its study and submit its report was about two months.

A great deal of information on conditions in Alaska villages has been gathered in the past for various purposes. Unfortunately, most of the data are scattered among government agencies in formats tailored to serve the specific purpose(s) for which the data were gathered in the first place. In two months, it was possible only to barely begin defining and documenting water related problems in the far flung and diverse villages of Alaska.

Members of the remote village water task force were:

- Jerry Sargent (chairman) - Alaska Department of Environmental Conservation
- Bill Ryan - Alaska Native Health Service
- Dave Gray - Representing the Alaska Federation of Natives
- Larry Kimball - Alaska Department of Community and Regional Affairs

### TASK FORCE ASSIGNMENT

The overall mission of the task force on remote village water as assigned by the AWSC was "development of additional information on those (remote village water related) problems considered to be serious and of immediate concern". Specific activities assigned to the task force were:

1. Review the technical memoranda for Activities 1 and 2 of the Alaska Water Assessment, and suggest appropriate changes.
2. Develop documentation for remote village water problems.

3. Describe the effects (adverse and beneficial) of not solving each problem.
4. Consider alternatives for solving the problems, and assess impacts of solutions.
5. Make any recommendations to the AWSC which the task force considers appropriate.

#### TASK FORCE ACTIVITIES

In order to schedule task force efforts such that as much as possible of the information requested by the AWSC could be provided, the following outline of activities for task force members was prepared:

1. Review technical memoranda for Activities 1 and 2 of the Alaska Water Assessment.
2. Develop a list of suspected water related problems in Alaska villages. Also, list all "places" considered villages for the purposes of this task force study.
3. Inventory the current status of Alaska villages with respect to the water related problems listed in 2 above.
4. From the inventory in 3 above, confirm or discount problems listed in 2 above. The inventory is documentation of confirmed problems.
5. Evaluate problems confirmed in 4 above in view of the State Regional Futures in the technical memorandum for Activity 2 of the Alaska Water Assessment.
6. Speculate about what new water related problems might arise in Alaska villages in view of the State Regional Futures.
7. Describe consequences of not solving problems identified in 4 and 6 above.
8. Discuss alternatives for solving problems listed in 4 and 6 above, and estimate consequences and impacts of solving them.

## RESULTS

With time to complete all eight of the activities listed above, the task force might have arrived at a clear definition of water related problems in remote Alaska villages, along with alternatives for solutions. But in the two months available to the task force and with the efforts of the task force members being an addition to their full time jobs, only a beginning could be made.

### Review of Technical Memoranda

The short section on remote village water in the technical memoranda for Activities 1 and 2 are very general, and none of the broad generalities seemed to be greatly in error. The few comments by task force members on the technical memoranda are:

1. For the purposes of the Water Assessment, the number of villages, or "small communities that are remote geographically, and in many cases culturally, from the state's population centers" (quoted from the Activity 2 technical memorandum) was determined by the task force to be 201.
2. The technical memoranda were correct in stating "The greatest difficulty with water systems may not be in getting them installed, but keeping them running." The task force would change the word "may" to "is".
3. The state's Village Safe Water (VSW) program is currently structured and funded adequately to maintain VSW systems after installation, a statement to the contrary in the Activity 2 technical memorandum notwithstanding.
4. Questions raised about the appropriateness of water quality standards in the Activity 1 technical memorandum also apply to waste treatment and disposal standards.
5. In the Activity 1 technical memorandum, complicated and difficult logistics should be added to "cold climate and permafrost" as factors complicating solutions to remote village water problems.

## Water Related Problems in Remote Villages

Members of the task force were asked to reach a consensus on a list of the general categories of remote village water problems. The list of problems is:

1. Domestic Use
2. Industrial and Institutional Use
3. Contamination by Waste Disposal
4. Flooding
5. Erosion

After lengthy discussion, water based transportation was eliminated from the list of problems since that problem might be more legitimately included in a transportation study. Also, human use or consumption of water resources has not yet resulted in water transportation problems that did not exist independent of human activity.

## Current Status of Remote Villages

### Need for Inventory

The task force as a group confirmed what the individual task force members had previously suspected independently, to wit there is no comprehensive compilation of data by which the severity and extent of the water related problems listed in the previous section of this report could be assessed. Hence it became necessary to gather and compile the appropriate data from various files and references.

A comprehensive and accurate inventory of the status of remote villages with respect to water related problems will take many months to prepare. Incidentally, such an inventory will be done as part of a joint program planning effort between the Alaska Department of Environmental Conservation's Village Safe Water Program and the USPHS Alaska Native Health Service. For the purpose of the task force study, however, only a barely cursory inventory could be done. Hence conclusions drawn from the inventory done by the

task force, and presented in this report, must be considered only a gross first estimate of village conditions, subject to many omissions and errors in data for individual villages.

### The Inventory

Choices of data to include in the inventory were based on what information was needed to judge the extent and severity of the 5 remote village water problems listed earlier in this report. Categories of data sought for each village included in the study (a total of 201 villages) were:

- a) population, b) number of homes, c) present domestic water supply, d) adequacy of present domestic water supply, e) planned or ongoing improvements in present domestic water supply, f) housing projects planned, g) name and description of institutions and/or industrial establishments, h) present water supply for institutions and industrial establishments, i) adequacy of present water supply for institutions and industrial establishments, j) planned capital projects, k) garbage disposal method, l) domestic sewage disposal method(s), m) industrial and institutional sewage disposal method(s), n) other man-made contamination of natural surface or subsurface waters, o) frequency of flooding, p) severity of flooding (percent of village), q) type of flooding, and r) whether or not there is an erosion problem. All categories of information were not, of course, available for all 201 villages.

Domestic Use- The severity of the village domestic water use problem was judged based on data from 190 villages. The villages were categorized as: 1) hauling water from undeveloped and unimproved sources, 2) hauling water from a developed source(s), and 3) having water service to each home (including individual wells, piped service, and vehicle delivery). If the service from a water supply system in category (2) or (3) appeared reasonably dependable (in quality and quantity) and convenient to consumers, the village with that system was considered not in need of immediate domestic water use improvements. On the other hand, all villages in category (1), and any villages in categories (2) and (3) with undependable or unreasonably inconvenient systems were considered in need of immediate domestic water use improvements.

Table I is a summary of the domestic water use data.

TABLE I. Domestic Water Use Summary

Category	Number of Villages	% of 190
1. Haul water from undeveloped source(s)	48	25
2. Haul water from developed source(s)	63	33
a. Portion of 2 adequate	34	18
b. Portion of 2 inadequate	29	15
3. Have water service to homes	79	42
a. Portion of 3 adequate	54	28
b. Portion of 3 inadequate	25	13
4. Require immediate improvements in domestic water use (1 + 2b + 3b)	102 <sup>a</sup>	54
5. Do not require immediate improvements in domestic water use (2a + 3a)	88 <sup>b</sup>	46

a. Represents a total population of 24,105 or 49% of the villages' population.

b. Represents a total population of 24,957 or 51% of the villages' population.

Industrial and Institutional Use- The severity of industrial and institutional water use problems was evaluated based on data from 141 villages containing a total of 358 institutions and industrial establishments. Data were not readily available on industrial and institutional water use in the other villages.

The water supplies of the 358 institutions and industrial establishments were categorized (see Table II) as adequate, moderately inadequate, and severely inadequate.

TABLE II. Industrial and Institutional Water Use

Category	Number of Institutions and Industrial Establishments	% of 358
Have an adequate water supply <sup>a</sup>	170	48
Have a moderately inadequate water supply	127	35
Have a severely inadequate <sup>b</sup> water supply	61	17

a. Adequate means piped service to a building plumbing system, with water of reasonably acceptable quality and quantity.

b. Severely inadequate means water is unreasonably difficult to obtain and/or quality is poor enough to discourage consumption.

Contamination by Waste Disposal- In evaluating the extent of man-made contamination of natural surface and subsurface waters around remote villages, the task force examined garbage disposal methods, sewage disposal methods and any other evidence of contamination (e.g. fuel spills) in sources from which the inventory was drawn. The severity of village water contamination was judged based on data from 146 villages. Those villages were categorized as having no evidence of contamination of natural waters, having severe and hazardous water contamination problems, and having conditions such that contamination of natural waters is very likely (even though no immediate or severe consequences of such contamination are evident). A severe and hazardous contamination problem is defined as a situation where direct contact between people and untreated sewage is possible (e.g. honey buckets dumped on a river bank, cess pool contents flooding to the ground surface).

A summary of the data on contamination of natural waters around remote villages is shown in Table III.

TABLE III. Contamination of Natural Waters

Category	Number of Villages	% of 146
No evidence of Contamination	45	31
Severe and hazardous contamination exists	70	48
Potential for contamination exists, but no immediately hazardous situation exists	31	21

Flooding- The flood data used in this study were taken from the Flood Hazard Information summary prepared by the Alaska District of the Corps of Engineers. Of the 201 remote villages (as defined for the purposes of this study) the Corps of Engineers Flood Hazard report contained sufficient information on 174. Those 174 villages were categorized as having a severe flooding problem (at least 20% of the village flooded at least once every 5 years), a minimal flooding problem (any portion of the village flooded no more frequently than once every 100 years) and a moderate flooding problem (any village not in the severe or minimal categories). Table IV is a summary of the flood data.

TABLE IV. Flood Hazard

Category	Number of Villages	% of 174
Severe flood problem	10	6
Moderate flood problem	96	55
Minimal flood problem	68	39

Erosion- The erosion data used in this study came from the same source as the flood data. The Corps of Engineers report only indicates whether there is or is not erosion at a given village site. Apparently the Corps indicates an erosion problem if they have ever received reports revealing such a problem. Lacking such a report, no erosion problem is indicated. In other words the erosion data are not the result of systematic evaluation of the erosion situation at all villages. The Corps Flood Hazard report has erosion data on 192 of the 201 villages in this study. Of those 192 villages, 86 are reported as having an erosion problem (45%), while 106 are listed as not having erosion problems (55%).

#### Evaluation of Problem List After Inventory

In general, the inventory data confirm that domestic use, industrial and institutional use, contamination by waste disposal, flooding and erosion are indeed significant problems for remote Alaska villages. Extrapolating the data to all 201 villages included in the study, which represents a total population of 50,345, the following conclusions are drawn:

1. Domestic water service to about 24,000 people in rural Alaska is in need of immediate improvement.
2. Water service to about 106 institutions and industrial establishments in rural Alaska is severely inadequate, while service to about 219 institutions and industrial establishments is moderately inadequate.
3. In 96 Alaska villages there is severe and hazardous contamination of natural surface and/or subsurface waters due to disposal of man-made wastes. In another 42 villages the potential for such contamination exists.
4. The task force was surprised to learn that only about a dozen villages have a severe flooding problem by the definition of severe used in this report and according to data from the Corps of Engineers. It must be pointed out, however, that "severe" means different things to different people, and less than half of the villages can be considered as not having flooding problems.

The task force is convinced that flooding is a major problem in Alaska that cannot be overlooked. It is also important to recognize that "flooding" can refer to a threat from both high water and moving ice.

5. The erosion data gathered for this study do little to confirm, discount or quantify the extent of erosion problems in Alaska villages. It is probably safe to speculate, however, that at least half (and perhaps far more) of the 200 plus villages in Alaska face erosion problems.

#### Remarks

Gathering the inventory data and evaluating the current status of remote village water problems consumed nearly all the time available to the task force for this study. Hence little time was spent analyzing the State Regional Futures, predicting consequences of not solving water related problems, and describing alternatives for solving problems. Those issues were discussed, however, in a lengthy and wide-ranging meeting of the task force. Following is a summary of the major points made during that meeting.

1. Inadequate water supply and waste disposal systems in villages cause health problems and make life unnecessarily uncomfortable and inconvenient. A measurable portion of village disease and death rates can be attributed to substandard water supply and waste disposal methods. When village residents must devote a significant portion of their individual energies to satisfying basic sanitation needs (the same needs satisfied as an assumed matter of course for most Alaskans), less time, energy and other resources are available for more productive enterprise.
2. Water supply and waste disposal problems in Alaska villages can be solved given enough money and commitment by government. The technology exists to make adequate water supply and waste disposal services available in virtually all villages. But the technology can be applied only if money is available for capital construction. And capital construction is only a beginning. Successful operation,

maintenance and management of village sanitation facilities is far more difficult to contend with than construction. Unless operation, maintenance and management problems are solved, much capital construction effort is wasted.

Satisfactory service from even the simplest water supply and waste disposal facility is doubtful unless technical, management and, frequently, financial assistance is made available to villages from outside sources. The need for assistance increases as the complexity of sanitation facilities increases. The relatively recent standards of performance imposed by government on water supply and waste disposal systems have made and will make mandatory ever more complex systems.

3. Whatever programs and funds are made available to villages for solving sanitation problems could eventually be administered through the native regional service organizations, which are primarily the non-profit counterparts of the land claim corporations and the regional health corporations. Although not currently in a position to take on complete responsibility for multi-million dollar sanitation facility programs, the regional organizations are much closer to the village people and their environment than are most government agencies. Hence if the regional organizations are willing, every effort should be made to build their ability to administer programs providing village sanitation services.
4. When a more abundant, more convenient and better quality water supply is made available in a village, the waste (especially sewage) disposal needs of that village will increase correspondingly.
5. The availability and cost of energy relate to several aspects of village water. Most of the village energy needs are met by petroleum fuels. Because of transportation problems, large storage capacities are required to sustain heat and electrical energy production throughout the winter. In addition the cost of fuel in villages ranges from two to five times the cost in major Alaskan urban centers. A majority of the villages currently

have inadequate or no bulk fuel storage capacity. The energy requirements, then, for the operation of domestic water and sewage treatment facilities are critical factors in establishing these services. Another aspect of the increased use and need for fuel in the villages is the increased threat that large scale fuel storage and delivery poses for water pollution. Alternate sources of energy have been proposed for some areas such as wind generated, hydroelectric, and geothermal power. However, these sources are only in the development stage.

6. Solutions to flooding and erosion problems are less technological than institutional and social. If founded in good comprehensive planning, possible solutions to flooding and erosion problems include relocating villages, protecting villages from damage with physical facilities (e.g. breakwaters, retaining walls), planning to accept some expected amount of damage, and lessening flood and erosion damage by modifying natural water flows. Of overriding importance, however, is the need to consider the lives, values and aspirations of the village residents.
  
7. Most of the villages depend on water transportation for a large portion of their bulk supplies. A large percentage of these communities are accessible by water for only a few months of the year when the rivers and the coasts are free from ice. The resultant high transportation costs and limited delivery adversely affect village development and the provision of basic goods and services. Although harbor and docking facilities, navigation aids, and flood and erosion control prescriptions can improve water transportation, the development of land and air transportation systems offers alternative and complementary solutions to transportation problems.

SUMMARY OF DATA

From  
Survey of Rural  
Sanitation Facilities

Number of villages in survey 201

Total population as of June, 1976 - 50,345

I. Domestic Water Use (Data from 190 villages)

Category	Number of Villages	% of 190
1. Haul from undeveloped source(s)	48	25
2. Haul from developed source(s)	63	33
3. Have water service to homes	79	42

II. Industrial and Institutional Use (Data from 141 villages with a total of 358 establishments)

Category	Number of Institutions and Industrial Establishments	% of 358
1. Have an adequate water supply <sup>a</sup>	170	48
2. Have a moderately inadequate water supply	127	35
3. Have a severely inadequate <sup>b</sup> water supply	61	17

a. Adequate means piped service to a building plumbing system, with water of reasonably acceptable quantity and quality.

b. Severely inadequate means water is unreasonably difficult to obtain and/or quality is poor enough to discourage consumption.

III. Planned Improvements in the Water Supply (Data from 158 villages)

Category	Number of Villages
1. Planned	47
2. Under construction	10

IV. Contamination of Natural Waters

Category	Number of Villages	%
1. Garbage Disposal (Data from 132 villages)		
a. Indiscriminate dumping	23	17
b. Controlled dumpsite	50	38
c. Dumpsite present but may or may not be in use	59	45
2. Domestic Sewage Disposal (Data from 163 villages)		
a. Privies and/or honey buckets - dump site unknown and/or inadequate	78	48
b. Honey buckets with adequate and controlled dump site	13	8
c. Have disposal service to homes (e.g. haul, piped, individual on-site system)	72	44
3. Industrial and Institutional Sewage Disposal (Data from 117 villages with a total of 278 establishments)		
a. Privies and/or honey buckets - dump site unknown and/or inadequate	55	20
b. Honey buckets with adequate and controlled dump site	16	6
c. Have disposal service to establishment (e.g. haul, piped, individual on-site system)	207	74
4. To Summarize the Evidence of Contamination (Data from 146 villages)		
a. No evidence of contamination	45	31
b. Severe and hazardous contamination exists	70	48
c. Potential for contamination exists, but no immediate hazardous situation exists	31	21

V. Flood Hazard (Data from 174 villages)

Category	Number of Villages	%
1. Severe flood problem <sup>a</sup>	10	6
2. Moderate flood problem <sup>b</sup>	96	55
3. Minimal flood problem <sup>c</sup>	68	39
a. At least 20% of village floods at least once every five years.		
b. Any village not in the severe or minimal categories.		
c. Any portion of the village flooded no more frequently than once every 100 years.		

VI. Erosion (Data from 195 villages)

Category	Number of Villages	% of 195
1. Army Corps of Engineers indicates erosion problem	89	46
2. Army Corps of Engineers <u>does not</u> indicate erosion problem	106	54

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APPENDIX A

# MEMORANDUM

# State of Alaska

TO: The Honorable Jay S. Hammond,  
Governor

DATE: September 13, 1976

FILE NO:

TELEPHONE NO:

FROM: Ernst W. Mueller,  
Commissioner  
Department of  
Environmental Conservation

SUBJECT: Village Safe Water  
Program Planning

On September 12, 1975, we provided you with a briefing on the Village Safe Water (VSW) program. In the briefing we pointed out the need for planning and policy-making with respect to the State's role in providing rural sanitation facilities. This memorandum is a progress report on VSW planning efforts, with recommendations and a description of options to serve as the basis for policy decisions to guide the VSW program.

## INVENTORY OF RURAL SANITATION SERVICES

A beginning has been made on a statewide inventory of rural sanitation facilities. The form of the inventory and its current status are basic described in Appendix A which contains a report entitled Report of the Task Force on Remote Village Water for the Alaska Water Assessment. The task force chairman, Jerry Sargent, is the current manager of the VSW program. Appendix A also contains a summary of the inventory data gathered.

The inventory must now be passed among the various agencies, organizations and individuals that are familiar with sanitation facilities in individual villages for appropriate additions, deletions, and corrections. Ultimately, of course, the accuracy of the inventory will have to be verified by visiting sample villages and observing how well existing facilities match the inventory data.

Preparing the inventory and keeping it up to date has been, and will continue to be, an enormous task. It appears, however, that the inventory will be well worth the investment. Large sums of State, federal, and other monies are spent on capital projects in Alaska's villages, without the benefit of adequate site data. In fact, a healthy amount is sometimes included in rural capital projects for site investigations - many of which are duplications of previous investigations. Also, the data collected for specific projects are not systematically organized and preserved for use on future projects. More money is probably already

being spent each year to gather village site data than would be needed to set up and maintain a single comprehensive inventory of all rural sanitation facilities in the State.

Besides being of value to the State, an accurate inventory of rural sanitation services would also be valuable to other government entities, Native organizations, communities and individuals (e.g., see Appendix B for a copy of a letter from the Bristol Bay Health Corporation dated July 30, 1976).

The Department of Public Works is currently working on an inventory of State facilities as part of a revamping of State construction methods. Part of their data, and perhaps some of their inventory management methods, will be valuable to us.

We suggest that developing and maintaining the inventory of rural sanitation facilities be a top priority VSW activity.

#### CONSTRUCTION OF VSW FACILITIES

##### Past Projects

In our VSW briefing to you dated September 12, 1975, we described problems encountered when VSW facilities were constructed through State construction contracts administered by the Division of Buildings. Since then we have completed one facility (Pitkas Point), and nearly completed two others (Beaver and Koyukuk), using the design and construction management techniques described in the September 12th briefing.

We estimate that the Pitkas Point project cost at least 25% less than it would have by traditional State construction methods. Just as important, however, is the fact that the facility was built in less than a year, and both we and the village are happy with it.

The Beaver and Koyukuk projects were delayed several months due to funding entanglements with the Legislative Budget and Audit Committee. - But they will be completed around January or February of 1977, at costs comparable to our Pitkas Point experience.

Our latest project is at Kongiganak, where the design and construction methods will be similar to the methods used at Pitkas Point, Koyukuk, and Beaver. A significant difference, however, is that the State is not party to the Kongiganak design and construction management contracts. Rather the State has made a VSW construction grant to the

village, the village has contracted directly with a design and construction management consultant, and we are helping the village administer their contracts.

### Future Projects

The political representatives of the people of Alaska (i.e., the legislative and executive branches of State government) passed a bond bill during the Ninth Legislative Session calling for 1.5 million dollars more for VSW capital construction. If Alaska's residents approve the bond bill in November, we will carry out the public's wish and build about three more VSW facilities during FYs 77 and 78. Our intention would be to use the same design and construction management methods we used at Kongiganak.

In selecting villages to receive the FY 77-78 VSW projects, we would make a concerted effort to involve the appropriate regional Native organizations. We feel that ultimately any VSW construction the people of Alaska choose to fund should be managed by the non-profit regional Native organizations (see Appendix C for VSW construction options as stated in a draft of the Department's FY 78 budget submittal). Hence the regional organizations should be involved in projects right now to the extent they are able. Over the next several years we must try to develop their ability to manage the VSW construction program.

### OPERATION AND MAINTENANCE OF VSW FACILITIES

As we have pointed out frequently in the past, virtually no village in the State has the resources to adequately operate, maintain and manage a VSW facility (or any other utility system) without outside financial, technical, and management assistance. This Department will spend \$289,000 in FY 77 to help eight villages operate and maintain their VSW facilities. The total of the operating budgets for those same eight facilities in FY 77 is estimated at \$470,000.

In FY 78 there will be nine VSW facilities in operation, and the Department has requested \$371,000 to assure their successful operation and maintenance. The total of the FY 78 operating budgets for the nine facilities is estimated at \$606,500.

A recommendation of the Governor's Management and Efficiency Review was that VSW facilities not be constructed since the villages are unable to operate and maintain them without assistance. Such a question is less a matter of management efficiency than a matter of public policy. In the VSW Act the people of the State said provisions were to be made for water supply, waste disposal, bathing and laundry services

in every village in the State. Providing those services requires public expenditures for both capital construction and operation and maintenance. As the managers of the VSW program, we are obligated to point out the futility of capital construction without adequate provisions for operation and maintenance. Then it is up to the public to decide whether or not the State should provide rural sanitation services as specified in the VSW act.

During FY 76, VSW operation and maintenance support to villages consisted of cash grants to the villages, equipment and materials purchased by the State and given to the villages, and contractual services provided by people and businesses under contract with the State. In order to involve the villages more in managing their VSW facilities, and to avoid the costs and delays attending State and Departmental administrative procedures, VSW operation and maintenance funds will be distributed only as grants to the villages as soon as a grant system to do so is established in FY 77.

If there is to be an operation and maintenance support program for VSW facilities funded by the State in years to come, such a program should ultimately be administered by the non-profit regional Native organizations. As with the VSW construction program, however, the regional organizations are not yet fully capable of taking on management of a VSW operation and maintenance program. Part of our job would be to build such a capability in the regional organizations.

#### VSW PLANNING

Our planning objectives in the VSW program are still as described in the September 12 briefing. The inventory of existing rural sanitation services has occupied most of our planning attention so far, although we have also made progress in developing a familiarity and working relationship with the regional Native organizations and other agencies with interest and involvement in providing rural sanitation services.

Our ultimate goal is still to design a comprehensive program for achieving sanitation services in Alaska villages. That design should suggest what role the State (and all other appropriate groups) should play in providing rural sanitation services. It could take at least another year or two to develop the comprehensive program.

We recommend that only a limited number of VSW facilities be constructed from now on until long term provisions are made for their operation and maintenance, and until we have developed the comprehensive program for rural sanitation services. If the people of the State want some VSW construction to take place in the mean time, we suggest no more than two facilities per year.

#### SUMMARY OF RECOMMENDATIONS

- 1) A complete inventory of rural sanitation services should be developed and maintained as part of continuing VSW program activities.
- 2) A top priority activity in the VSW program should be comprehensive planning to develop a statewide program for providing rural sanitation services (see specific objectives in the September 12 briefing).
- 3) Construction of new VSW facilities should be limited to no more than two projects per year until a comprehensive program for rural sanitation services is developed, and until adequate provisions are made for operation and maintenance.
- 4) The State must accept the responsibility of making provisions for successful operation and maintenance of VSW facilities. Hence State funds to support VSW facilities already constructed and to be constructed (if the people of Alaska call for any) must be provided every year unless other provisions are made as part of the comprehensive program for rural sanitation services called for in (2) above.
- 5) Assuming there is a place for the VSW program in the comprehensive program for rural sanitation services called for in (2) above, the VSW program (both capital construction and operation and maintenance) should ultimately be administered largely by the Native regional non-profit organizations. Since those organizations are not yet ready to take on such a program, the State should help develop their ability to do so.

10/10/1954

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APPENDIX B

BRISTOL BAY AREA HEALTH CORPORATION

P. O. BOX 233  
DILLINGHAM, ALASKA 99576

PHONE: (907) 842-3322

July 30, 1976

Dr. J.W. Sargent, PH, D.  
Sanitary Engineer  
Dept. of Environmental Conservation  
Village Safe Water  
Pouch O  
Juneau, Alaska 99811

Dear Dr. Sargent:

Please find enclosed the village information sheets required for your inventory of sanitation services. I have included information available from BBAHC village files and from the OEH files of Kanakanak Service Unit. In your letter, you did not list the particular agencies asked to participate in the inventory in the Bristol Bay region. If you have not included Regional School Districts 6 and 7, (formerly Alaska Unorganized Borough School District), I recommend that you do so; the school district personnel have accurate information on the village schools and are aware of community conditions as well. To clear up some confusion, the Bristol Bay Area Health Corporation is a non-profit health entity, its service area covers the combined boundaries of the Kanakanak Service Unit/IHS and Bristol Bay Native Corporation, the for-profit corporation formed under the Native Land Claims Settlement Act. I am enclosing a list of villages served by the Bristol Bay Area Health Corporation for your information in the future. The detailed update on Dillingham was obtained from the planning office of Choggiung Limited, the Dillingham Village Corporation.

The reaction from all of us working on the inventory is that it is long overdue and that we could all use a copy of the completed survey for our own planning files. Please send us a copy when you are finished.

Sincerely,

BRISTOL BAY AREA HEALTH CORPORATION

*Nancy Knoohuizen*  
Nancy Knoohuizen  
Planning Officer

NK:slc

cc: Robert J. Clark, Executive Director  
Ron Perkins, Environmental Health Services, Kanakanak  
Tom Hawkins, Choggiung Limited

Enclosures: List of BBAHC Board Members & Village Information Sheets

APPENDIX C

## VSW Construction Options

Excerpts from Draft of FY 78 Budget

### Written in a Draft of Department's FY 78 Budget

The alternatives for construction of VSW facilities are essentially the same for FY 78 as they were for FY 77 (see the following list of alternatives A, B, C and D for Objective 3 as listed in the Department's FY 77 budget s submittal).

The latest VSW project (in Kongiganak) is being designed and constructed by about the same methods as described in Alternative A, except that the state is not party to the consulting contracts. Rather the state has a separate grant agreement with the village.

### Alternatives A, B, C, and D for Objective 3 as listed in the Department FY 77 Budget

#### Alternative A - Construction Management by ADEC through Consultants

The three most recent VSW projects (Beaver, Koyukuk and Pitkas Point) are being designed and constructed under three way contracts among ADEC, the villages, and a consulting engineering firm. There is one contract for design and one for construction management. The design contract specifies the scope of work to be performed by the engineering consultants, sets the compensation rate for design services, and prescribes the procedure by which the village pays the consulting engineer with VSW grant money from ADEC. Under the construction management contract the consulting engineer agrees to manage all activities necessary for construction of a VSW facility, including ordering, scheduling, and expediting all equipment and material necessary for construction. The village agrees to provide local people to work on the project. The construction management contract also prescribes procedures by which the village pays construction expenses, the consulting engineer's fee, and labor costs with VSW grant funds from ADEC. These three projects have been very satisfactory so far.

(APPENDIX E con't)

Alternative B - Construction Contracts Managed by ADEC through Construction

For two VSW projects (Northway and Chevak), ADEC hired engineering consultants to design and prepare construction contract documents. Construction was done by contractors under competitive bid contracts. These projects were reasonably successful, although the relationship between the construction contractors and the villages was beyond ADEC's control.

Alternative C - State Public Works Construction

Three VSW facilities (Selawik, Alakanuk and Nulato) have been built by traditional state construction methods (i. e. Division of Buildings managing design by consultants and construction by competitive bid contracts). The projects were far more costly than originally estimated and the facilities themselves are unsatisfactory in many ways (see FY 76 Issue Analysis entitled Village Safe Water Projects).

When a construction contractor does a job in a remote Alaskan village, he usually moves a construction camp and crew of "outside" workers into the village. The impact of such a camp on a village is frequently less than beneficial to the village.

Alternative D - Contracts with Native Organizations

This alternative is yet untried. Some of the regional native corporations may develop into organizations capable of managing programs like the VSW program. Conceivably, a Native Corporation could contract with the State to manage VSW projects, either totally or in part. Much planning analysis and negotiation is necessary before this alternative can be fairly weighed, and the native corporate entities need time to become more firmly established.

THREE

VILLAGE SAFE WATER PROGRAM  
An Update to January 20, 1977

Introduction

The Village Safe Water Act (AS 46.07), passed in 1970, calls for "at least one facility for safe water and hygienic sewage disposal in each village" in Alaska. Little progress was made in the program until December of 1972 due to lack of funds, inability to hire someone to administer the Village Safe Water (VSW) program, and lack of operation and maintenance provisions. Since 1972, six VSW facilities have been constructed, two more are nearly complete, and another is being designed. In addition, an operation and maintenance support program and a comprehensive planning effort have been organized and initiated.

Construction

The six VSW facilities constructed to date are in the villages of Northway, Chevak, Alakanuk, Selawik, Nulato and Pitkas Point. A facility will be completed in Beaver in January, 1977, and in Koyukuk in February of 1977. A facility for Kongiganak is being designed, and construction is scheduled for summer of 1977.

At the nine locations listed above, the VSW projects consist of central sanitation facilities to which village residents can come to obtain water supply, sewage disposal, bathing and laundry services. No piped water distribution or sewage collection systems are involved except for water and sewer service lines to schools.

Construction methods used so far have included: 1) competition bid construction contracts administered by the Alaska Department of Public Works, 2) competitive bid construction contracts administered by the Alaska Department of Environmental Conservation (ADEC), and 3) force account construction by the villages through construction management contracts with engineering consultants. All facilities so far have been designed by engineering consultants.

The force account/construction management method of construction has been the most satisfactory of the three methods used. Facilities constructed that way have been built cheaper and faster than those built under competitive bid construction contracts; the quality of construction has been better; and the villages have been more intimately involved in, and satisfied with, their projects.

VSW facilities have cost from \$350,000 at Pitkas Point (begun in FY 76) to almost \$1,200,000 at Selawik (begun in FY 74). Villages served have ranged in size from 85 (Pitkas Point) to over 500 (Selawik).

#### Operation and Maintenance

Experience in the VSW program has confirmed that virtually any utility system installed in remote Alaskan villages is doomed to eventual failure unless the village is given financial, technical, and/or management assistance. Any program for providing utilities in rural Alaska must either adequately provide for long term operation and maintenance, or expect system failures that adequate operation, maintenance and management could have prevented.

In FY 76, the annual operating budgets for VSW facilities ranged from \$28,000 at Northway to over \$100,000 at Selawik. ADEC provided a total of about \$225,000 in VSW operation and maintenance grants in FY 76 to six villages. In addition, ADEC provided technical and management assistance to the six villages. Although expensive, the VSW operation and maintenance support program has made it possible for all completed VSW facilities to serve the public as intended.

### Comprehensive Planning

ADEC is developing a comprehensive plan intended to define the roles of State and federal agencies and other groups involved in providing rural sanitation services. An early step in this planning is to inventory all village sanitation facilities. Completing this inventory is viewed as the cornerstone of the VSW planning effort.

The Ninth Alaska Legislature passed a resolution suggesting that a VSW advisory committee be organized consisting of representatives from the 12 Native Regional Service Associations. This committee would assist ADEC with policy and management decisions concerning the VSW program. The Department feels the advisory committee is a good idea and welcomes increased involvement for the Regional Associations.

Several local, State, federal and private organizations participate either directly or indirectly in providing rural sanitation services. A strong working relationship must be developed among the diverse groups if a comprehensive plan for sanitation services throughout rural Alaska is to be successfully developed and implemented.

Goals and Objectives  
VSW Comprehensive Planning

GOAL

To develop a statewide comprehensive program for providing sanitation services in rural Alaska.

PLAN OBJECTIVES

1. Inventory existing water supply and sewage disposal facilities in rural Alaskan villages.
2. Develop criteria for evaluating the adequacy of existing water supply and sewage disposal facilities identified in # 1 above.
3. Identify existing agency programs providing sanitation facilities to Alaskan villages. Quantify the resources currently available. Identify and describe the technical, management and administrative approaches presently used.
4. Develop criteria to evaluate the effectiveness of these programs.
5. Evaluate the adequacy of technical, management and administrative approaches identified in #3. above.
6. Identify and evaluate alternative technical, administrative and management methods that might be used to address sanitation needs in rural Alaska.
7. Recommend changes in the activities and resources of existing programs to incorporate the alternatives noted in # 6 above. Recommend new programs and/or authority necessary for implementation.
8. Analyze existing methods of operation, maintenance and management of village sanitation facilities.

9. Develop alternative methods for operation, maintenance and management of village sanitation facilities.
- 10.- Recommend changes in the activities and resources of existing programs to incorporate the alternative approaches noted in #9 above.
11. Integrate the findings of the above analysis with the comprehensive plan.
12. With the assistance of the appropriate governmental agencies and Native non profit regional associations, proceed to implement the plan.

#### PUBLIC INVOLVEMENT & PROGRAM COORDINATION

Because several local, State and federal organizations participate either directly or indirectly in developing rural sanitation facilities, this major planning effort can not be undertaken alone. To insure proper plan development and implementation, a strong working relationship must be developed among the diverse groups currently working on rural sanitation problems.

Public participation and inter-agency coordination must be an integral part of the VSW comprehensive planning process. In this regard, a maximum effort will be made to enlist the active participation of the native regional health organizations, the villages and appropriate federal and state agencies. We hope that by the time a draft of the plan has been formulated, significant public comment and coordination will have been obtained. The results of our collective efforts will be a comprehensive plan for providing rural sanitation services in Alaska.

#### Principal Contact

For more detailed information on the Village Safe Water comprehensive planning process, please contact:

Greg Capito  
Senior Planner  
Alaska Department of Environmental Conservation  
Pouch O  
Juneau, Alaska. 99811  
Phone: 465-2664

FOUR

TO: Jonathan Scribner  
Director  
Division of Water Programs

DATE: September 21, 1978

FILE NO:

TELEPHONE NO:

FROM: Jerry Sargent  
Chief  
Water Supply Section

SUBJECT: VSW Planning

The VSW planning effort has progressed to a critical juncture. We have been following a set of carefully developed planning objects (see copy enclosed), the first two of which we have accomplished, and we see a way to handle objectives three and four. But now we are all but stalled on the fifth objective.

Greg Capito has written a good summary of our planning efforts to date (see copy enclosed). As you can see, successful accomplishment of objective five is the key to going on with recommendations for improving methods of solving rural sanitation problems.

We could just gloss over the lack of information for evaluating existing sanitation methods, do superficial and subjective evaluations, and crank through the remaining objectives in order to "turn out the plan." But that would be falling into the trap that dooms many planning efforts to failure. If existing sanitation methods cannot be rationally and objectively evaluated by consistent and disciplined methods, arguments for change can neither be supported nor convincingly made. The result is a plan on the shelf gathering dust.

We are looking for fresh insights and ideas anyone might have about how to handle the evaluations. We also want all interested parties to understand our situation. Greg's write-up will be sent to various people like Fred Reiff and perhaps the regional health directors in further search of ideas.

We may be faced with having to gather the information we need by going village to village, with whatever help we can get from PHS staff and people like Jordan. If so, it could take at least a year to do the evaluations alone. Greg is currently working up some time, manpower and cost estimates for possible ways of gathering the information.

ALASKA  
VILLAGE STUDY

GOAL

To develop a Statewide comprehensive program for achieving sanitation services in rural Alaska.

PLAN OBJECTIVES

1. Inventory existing water supply, sewage and solid waste disposal facilities in 200 rural Alaskan villages.
2. Develop criteria for evaluating the adequacy of existing water supply, sewage and solid waste disposal facilities identified in #1 above.
3. Evaluate the adequacy of sanitation facilities in 200 villages.
4. Identify existing agency programs providing sanitation facilities to Alaskan villages. Quantify the resources currently available. Identify and describe the technical, management and administrative approaches presently used.
5. Develop criteria to evaluate the effectiveness of these programs.
6. Evaluate the adequacy of technical, management and administrative approaches identified in #4 above.
7. Identify and evaluate alternative technical, administrative and management methods that might be used in rural Alaska.
8. Recommend changes in the activities and resources of existing programs to incorporate the alternatives noted in #7 above. Recommend new programs and/or authority necessary for implementation.
9. Analyze existing methods of operation, maintenance and management of village sanitation facilities.
10. Develop alternative methods for operation, maintenance, and management of village sanitation facilities.
11. Recommend changes in the activities and resources of existing programs to incorporate the alternative approaches noted in #10 above.
12. With the assistance of the appropriate governmental agencies and Native non-profit regional associations, prompt implementation of the plan.

## PUBLIC INVOLVEMENT AND PROGRAM COORDINATION

Because several local, State and federal organizations participate either directly or indirectly in developing rural sanitation facilities, this major planning effort cannot be undertaken alone. To insure proper plan development and implementation, a strong working relationship must be developed among the diverse groups currently working on rural sanitation problems.

Public participation and inter-agency coordination must be an integral part of the comprehensive planning process. In this regard, a maximum effort will be made to enlist the active participation of the Native regional health organizations, the villages and appropriate federal and State agencies. We hope that by the time a draft of the plan has been formulated, significant public comments and coordination will have been obtained. The results of our collective efforts will be a comprehensive plan for providing rural sanitation facilities in Alaska.

### PRINCIPAL CONTACT

For more detailed information on the comprehensive planning process, please contact:

Greg Capito  
Senior Planner  
Alaska Department of Environmental Conservation  
Pouch 0  
Juneau, Alaska 99811  
Phone: 465-2687

STATE  
of ALASKA**MEMORANDUM**

Department of Environmental Conservation

TO:  Jerry Sargent  
Chief  
Water Supply Section

DATE: August 29, 1978

FILE NO

TELEPHONE NO

FROM: Greg Capito *GC*  
Senior Planner  
Village Safe WaterSUBJECT: Progress Report-  
Alaska Village StudySYNOPSIS

Developing a rural sanitation program for Alaska is an immense undertaking. But in two (2) years, progress has been made to: 1) inventory existing sanitation facilities in 200 rural villages; 2) develop criteria to evaluate the adequacy of sanitation services in these communities; and 3) establish a working relationship with the diverse groups involved in rural sanitation.

However, the Alaska Village Study has reached an impasse. Our inability to collect the specific and detailed information needed to evaluate sanitation services in 200 remote villages is an immediate problem which must be resolved. If we don't come up with a timely solution, the study cannot be completed.

Another concern is our relationship with the Native Health Corporations. A lack of environmental health and sanitation expertise coupled with chronic staff turnover makes it extremely difficult to maintain a productive relationship with these 12 regional organizations.

The close working relationship with PHS which has evolved over the past two years must also be strengthened. Their level of involvement in the Village study must increase. In fact, the continued support and active participation of PHS are crucial to the success of the planning effort.

Of less immediate importance to the Alaska Village Study but certainly issues to watch include: 1) the passage of SB 449, the Water and Sewer Bond Bill; 2) the rift between AFN and the ANHB; 3) the continuing saga of lab support for the project; and 4) EPA's attempt to buy a piece of the Study.

INTRODUCTION

Building and maintaining water, sewer, and solid waste facilities in rural Alaskan villages is a difficult proposition. Over the years, local, State and federal agencies have invested millions in public funds to protect health by providing adequate sanitation facilities in the bush. These uncoordinated programs are haunted by complex social, economic, political and technical problems which have persisted for years and slowed efforts to develop really effective, long term solutions.

To remedy this situation, ADEC has been leading a drive to develop a comprehensive sanitation program for rural Alaska which will: 1) inventory sanitation facilities in over 200 villages; 2) evaluate the adequacy of these facilities and the agencies which sponsor them; and 3) propose changes in existing programs in order to improve sanitation services in the villages.

For two years ADEC, PHS and the Native Regional Health Corporations have been involved in this Alaska Village Study. What follows is a review of this planning effort with emphasis on problems and progress to date.

#### THE INVENTORY

This first step in the Alaska Village Study is complete. With help from the rural school districts, PHS and to a lesser degree, the Regional Health Corporations, basic information on water, sewer and solid waste services in 200 villages was compiled. One hundred copies were printed and distributed to people and organizations involved in rural sanitation. By strictly controlling distribution, we hope to make the annual update easier. This November, a call for updated information will go out. Corrections, additions and deletions will be made in December, then reprinted and distributed in January, 1979. Aerial photographs will be added to fill in the gaps.

For us, the Inventory is the cornerstone of the Alaska Village Study. Other uses within the Department include the preparation of revenue sharing forms and answering questions from the Commissioner and others about remote villages - especially during the legislative session. Environmental Analysis has used it extensively in water quality management planning and Facility Construction from time to time has felt the need to consult this document. Except for the preparation of sanitary surveys, the Inventory is rarely used in NRO, SCRO, and SERO. In fact, some staff members have never seen this document!

The real value of the Inventory to others is more difficult to determine. A spot check provides some insights. At PHS, where several copies have been distributed, the document is used to answer questions about facilities in remote villages. However, I don't think it's used day to day as a planning or management tool. A check of the service units reveals that most sanitarians know their villages and do not refer to the Inventory very much.

At BIA, where an increase in staff is noted, the Inventory is used to familiarize new personnel with school sanitation facilities. BIA emphasized that the Inventory is a positive step to improving communication and coordination with other agencies.

Within the Health Corporations use seems to vary. For example, in the North Slope Borough, their Capital Improvements Plan is used instead of the Inventory by the Department of Public Works and the Health Department. At SEARHC, new staff members unfamiliar with the Southeast Region find the Inventory valuable. At the Aleut/Pribilof League, the Inventory is considered a reliable source of information and is used by staff members when discussing sanitation problems with PHS.

At the State level, DOTPF (Facility Procurement) has used the Inventory extensively in its planning program. At the Alaska Energy Office in Anchorage, the Inventory is used on occasion, especially the aerial photographs, to locate existing and potential fuel storage sites in the villages.

At a minimum, the Inventory is a concrete example of cooperation between the Regional Health Corporations, PHS and the State. At a time when most organizations only talk about developing a strong working relationship with other units of government, this is no small item.

Updating the Inventory will be time consuming and laborious, but it's worth the effort.

#### THE EVALUATION

The second step in the Alaska Village Study is to evaluate the adequacy of the 200 village sanitation facilities identified in the Inventory. This activity is crucial because it should help identify the strong points and weaknesses of village sanitation systems and provide the basis for recommending changes in the programs which provide village sanitation services.

With help from PHS, and to a lesser degree the Health Corporations, an evaluation system was developed. During May 1978, agencies were contacted and dozens of reports reviewed in an effort to obtain the data required to complete the evaluation. It soon became obvious that the specific and detailed information needed could not be found in rural surveys or reports. Data gaps seemed to persist from one report to another. In early June, we contacted people with first hand knowledge of the villages. Based on our experience with the Inventory, the PHS sanitarians seemed most likely to have the information we needed. We focused our attention on the Doyon and Calista regions which contain one half of the rural villages in the State. In mid June I visited the Bethel Service Unit and interviewed two (2) field sanitarians. Each had about 3½ years of experience in the Delta. However, during two days of interviews, a serious problem was encountered. The sanitarians could not provide the specific and detailed information we need on villages in this region. They had no data on O&M, village economics, the reliability of village power or even basic health information for Grayling, Marshall, Shageluk, Holy Cross, Mt. Village, and Pilot Station. In Anvik and several other villages, they couldn't identify the preferred source of drinking water. These are several reasons for this lack of information:

1. Usually when sanitarians visit a village, it's for a specific purpose like vaccinating dogs or inspecting the health clinic. They aren't trying to answer questions concerning the economics, acceptability, or accessibility of a sanitation system.
2. In the more remote portions of this region, villages are visited only once a year and it's difficult to really evaluate sanitation services after spending so little time in a community.

3. Our evaluation system is very detailed and specific. The sanitarians have never examined village sanitation methods in this fashion. They can generalize based on their experience but the evaluation system demands much more.

Two PHS field engineers were then interviewed with similar results. The most glaring information gaps involved village economics. They had no idea of how villages obtained funds to pay local operators or sustain the facility from day to day. However, the engineers felt strongly that unraveling the mystery of village finances and spending priorities was the most important feature of the evaluation.

A few weeks later I tried another approach. I accompanied experienced AVCP employees to three (3) villages in an effort to collect this hard to get information. Enough data was obtained to complete three (3) evaluation forms in one (1) week. So even though this method was expensive and very time consuming, it works and we have the best information available on these village sanitation systems.

In mid August I was invited to the Inupiat Health Board Meeting in Barrow and tested yet another approach. For two (2) days I tried to interview individual Health Board members during meeting breaks to evaluate sanitation services in their villages. If this approach worked, it would expedite the review of sanitation facilities in 200 villages. However, I ran into a serious problem using this method. There was little time available to interview Health Board members. Fifteen or twenty minutes is barely long enough to get acquainted. During these short periods, I could get only a sketchy idea of what was happening in the villages. A good evaluation would probably take several hours if done by interview. Since most of the Health Board members were staying with friends, there weren't any other opportunities to meet later and talk about water and sewer problems. So I determined that this was not the way to collect the information needed to evaluate sanitation services in the villages.

Another approach is worth mentioning. This involves training qualified individuals to evaluate the adequacy of sanitation services. Initially, this idea was attractive because sanitarians, community liaisons and the like live in the regions, know the people and visit the villages, so if the evaluation could be incorporated into their travel schedules, we might save money and obtain some valuable information. However, this idea has not panned out because of the inherent quality control problems. The AVCP trip cited above really brought home just how persistent one must be to collect information by visiting the villages. I can't think of a qualified person in the Doyon or Calista regions with enough time and dedication to do this job right.

In summary, we recognized early on the lack of water quality and health data in the villages, but did not foresee similar problems collecting the other information needed to complete the evaluation. Given the size of this project and the time element involved, we are really in a bind. If we don't come up with an efficient way to collect this hard to get information, the study will be jeopardized.

COORDINATION

Because many local, state and federal organizations participate either directly or indirectly in providing rural sanitation services, the Alaska Village Study cannot be undertaken alone. To insure proper plan development and implementation, a strong relationship must be developed among the diverse groups currently working on rural sanitation problems. Keep in mind we must enlist the support of these diverse groups by persuasion since we have no authority over them. While it is impossible to effectively coordinate our activities with every group, we identified a few key organizations and opened lines of communication with them. The 12 non-profit Native Regional Health Corporations immediately attracted our attention because their responsibility is to represent Alaska Native people in all health related matters. In addition, they were by far the best organized group in the regions. At the federal level, the Office of Environmental Health within PHS has designed and constructed sanitation facilities in Alaska Native villages since 1962 and is still the lead agency in providing these services. To a lesser degree, we have also worked with BIA, HUD and EPA as well as AVCP and a few other regional organizations. What follows is a review of the working relationship we've developed with these groups.

Regional Health Corporations

House Concurrent Resolution #110 adopted by the Ninth Alaska Legislature suggested the formation of an advisory committee for the VSW program. This group, consisting of representatives of the 12 Regional Health Corporations would advise and assist in the administration of the VSW program. In February 1977 the Association of Regional Health Directors unanimously endorsed this idea and became our Advisory Board. Their first activity was to assist the Department in selecting candidate villages most in need of a VSW facility. This was a very difficult task because only one or two facilities could be built and 12 regions were competing for limited funds. Prioritization was done by examining background data on each village. This information was then placed in perspective by evaluating each community's prospects for sanitation improvements. After several weeks of deliberation, a priority list was drafted. On the whole this process worked very well. In fact, one Health Corporation not present had a village from its region placed at the top of the list! We've followed the Advisory Board's recommendations and VSW facilities are being built at Council and Tanana.

Late in 1977, the Health Corporations also helped provide basic information for the Inventory of Rural Sanitation Services. I spent many hours in their regional offices interviewing staff and identifying sanitation facilities in 200 rural villages. The Health Corporations were cordial and very generous with their time.

However, some serious problems have surfaced in our dealings with the Health Corporations. The first is turnover which has reached epidemic proportions. The average "life expectancy" of a health director is about eight months. Staff turnover is even greater and with so many people coming and going, it's almost impossible to maintain continuity and an effective working relationship with the 12 regional organizations.

Secondly, while sanitation is a big concern within the regions, most organizations do not have technical staff to address these problems. (Only Norton Sound employs a sanitarian.) Currently, the Health Corporations administer accident prevention, alcohol abuse, health aide, manpower, mental health and similar programs. So it's difficult to talk to them about evaluating the adequacy of sanitation facilities in the bush. As a result, little time has been spent with the Health Corporations on this important activity and communication has deteriorated over the last six months.

Finally, there has been internal squabbling within the non-profit corporations which may have a serious impact on our planning effort. AFN and the Alaska Native Health Board (ANHB) are struggling to decide who speaks for Native people on health issues. To firm up its power base, the ANHB apparently dissolved its standing committee, the Association of Regional Health Directors (ARHD), which acts as our Advisory Board. From now on the ANHB will formulate rural sanitation policy and the ARHD will only address regional problems. Already I've noticed that the Health Directors meet less frequently, and there's a real question about their ability to help us set construction priorities this fall. We need an advisory board made up of people that work day to day with village sanitation problems like the ARHD. We look to them for professional and technical involvement in establishing VSW program strategies. The ANHB is a lay group without technical expertise or staff and it will be extremely difficult to work with them on issues which require technical expertise and an intimate knowledge of the villages.

#### PHS

In the last two years we've spent hundreds of hours with PHS. Fred Reiff has been cordial and generous with his staff time. He appointed Lynn Wallace to work on the Alaska Village Study with us. Although this relationship is informal, we have made progress on the Inventory and to a lesser degree, the evaluation. Despite some strong philosophical differences, there seems to be considerable trust on both sides.

Continued PHS support of the Alaska Village Study is crucial because they are the lead agency in providing rural sanitation services and, as such, must play a major role in implementing any study recommendations which may be forthcoming. They also have by far the biggest and most talented staff available to help with the Study. The working relationship developed over the past two years must be strengthened as we move onto the more difficult areas of the Study.

When Lynn's replacement reports for duty this fall, we'll have to meet with Fred and see if we can secure more of a commitment. That should not be difficult if PHS perceives the Study as a valuable and essential part of their program. If Fred agrees to increase their level of involvement, there's hope for the future. If not, the Study will be jeopardized.

EPA

EPA involvement in the Alaska Village Study began early in 1977 when Senator Mike Gravel asked ADEC for ways to improve P.L. 92-500, the Federal Water Pollution Control Act of 1972. We responded with a carefully worded amendment to Section 113 which: 1) confirmed the State's position as the lead agency in trying to develop a comprehensive rural sanitation program; and 2) required all appropriate federal agencies to assist the State in developing the plan and obligated them to implement it. The amendment we originally proposed called for the President to direct federal agencies to participate in the study. But the Congress changed that and directed EPA to conduct the study. Congressional staff who made that change probably thought it would be negligible but it was the beginning of our problems with the Environmental Protection Agency. From this point on, the State's established position as the lead agency in developing a rural sanitation program for Alaska was in direct conflict with what EPA perceived as their new statutory responsibility under Section 113 of the Act.

Early in 1978, EPA officials remained in the dark about the Alaska Village Study. No directives, guidance or funds were forthcoming from headquarters. We then began to work with EPA officials in Anchorage to: 1) explain the objectives of the Study; 2) help define EPA's role in the project; and 3) secure federal support to help continue the work with authorizations we drafted into Section 113.

In May 1978, these issues were discussed at a meeting in Juneau with EPA Region X officials. At this meeting, EPA's role in the Alaska Village Study was defined as: 1) representing the federal government's regulatory interests; 2) motivating recalcitrant federal agencies (if any) to participate in the study; and 3) managing the typing, printing or other administrative tasks and submitting all reports required by the Act. It was reaffirmed that independent action by EPA would be counter-productive. Bob Burd and Ed Coate of Region X agreed with this position and seemed relieved that the State was able and willing to assume responsibility for directing the Alaska Village Study.

As to the question of funding, we learned that EPA officials had simply neglected to request the funds available under Section 113 and support for the project had "simply fallen into a crack." Neither was lab support possible because Region X couldn't handle the additional work load.

Clearly, the lack of lab support has slowed our progress. However, in retrospect, the loss of funds may have been a blessing in disguise. The paper work and bureaucratic red tape generated by an EPA grant would force us to spend considerable time on purely administrative tasks and less on doing the actual work. In addition, during the past two years we've learned you simply can't buy agency support for this project. Neither can the assistance of competent, qualified, professionals in the rural sanitation field be purchased, because most are already employed by organizations like BIA and the U.S. Public Health Service.

At this point in time there's a real question whether EPA can make any substantive contribution to the project. As a consequence, I think we should stand firm and resist any effort by EPA to buy a piece of, or become directly involved in, the Alaska Village Study.

#### Other Agencies

From time to time we've worked with HUD and BIA. Both have been cordial and cooperative. These organizations are indirectly involved with rural sanitation in the bush. Later in the Study, when we evaluate programs, we'll spend more time with them.

Since Jordan Suhr moved to Bethel to work with AVCP, we've taken a real interest in their IHS Feasibility Study. Jordan has agreed to help us evaluate sanitation facilities and does so when he visits the villages. But so far he has sent only 5 or 6 forms. When visiting a village he interviews the plant operator and evaluates the system while the AVCP economist does his thing with the village administrator. At the end of the day, they mingle with residents. Even though that approach is expensive, time consuming and laborious, it works and they have collected the best information available on village sanitation systems. However, Jordan points out that only 15-20 communities will be visited this summer because of financial and manpower constraints.

#### OTHER ISSUES

##### Laboratory Support

Early on we recognized that more data was needed to evaluate the adequacy of drinking water supplies in the villages. PHS agreed, for the Inventory revealed their information was spotty. However, lab support would be needed to analyze the drinking water of 200 rural villages. The saga began last March with the ADEC lab in Douglas. They couldn't help with a project of this size because bottle washers were in short supply. In May, there was a promise of support from EPA. Apparently Section 113 funds were available to assist us in obtaining lab support. After several weeks EPA notified us they couldn't help after all because funds had not been requested. (Meanwhile, the field season continues to slip by.) The U.S.G.S. was consulted in late June but their cost estimate was prohibitive. In July, with hopes fading, PHS decided to contract with a private outfit for laboratory service. The cost would be split 50/50 with ADEC reimbursing PHS when State funds became available. However, PHS couldn't simply go out and hire a chemist. The OEH contracting officer got involved and the matter has been tied up for months. Meanwhile, back at the Douglas lab, work had slackened, (with fall approaching), and they agreed to provide limited support until the PHS contract is awarded. The trail of tears continues into September with full time lab support just a dream (or memory).

The humor of this incident is lost when one considers how vital laboratory support is to the future of the Alaska Village Study--and how little control we have over the outcome.

SB 449

The Alaska Village Study has encouraged communication and thus helped to minimize duplication of effort in facility construction. But the 1978 Water and Sewer Bond Bill is a giant step backward because it directs ADEC to spend public funds in 11 rural communities, even though PHS has or soon will install sanitation services in each of these villages. In addition, the Legislature has dictated 11 project sites and thus undermined our relationship with the VSW Advisory Board, which in the past has been heavily involved in selecting communities most in need of a VSW facility. Finally, SB 449 is contrary to our policy of going slow on new construction--until the Village Study is completed and solutions to difficult questions like operation and maintenance are proposed.

In summary, SB 449 is a bad piece of legislation. It may complicate and seriously disrupt our efforts to develop and implement a rational program for addressing rural sanitation problems in Alaska.

CONCLUSIONS

This progress report has identified several important issues which may affect the outcome of the Alaska Village Study. Despite their potential impact, we have little control or influence over them. These include 1) timely lab support for the project; 2) passage of SB 449; 3) the rift between AFN and the ANHB; and 4) chronic staff turnover within the health corporations. We can exert some influence over three other issues mentioned in the report. These are: 1) EPA involvement in the project; 2) the problem of data collection; and 3) greater PHS participation.

With all of these factors at work, chances for completing the Study are 50/50 and less than that for making the December 1979 deadline.

FIVE

# Village Safe Water Projects in Alaska —Case Studies—

## DEFINITION OF PROGRAM

### HISTORY

Like other areas of the country, Alaska draws the traditional distinction between urban and rural areas. Here, the urban areas are concentrated around the major municipalities such as Anchorage, Fairbanks, Juneau and Seward. The remainder of the State is defined as rural and is often referred to as the "bush." Providing sanitation services (primarily water supply and waste disposal) in the bush is quite a different proposition from providing such services in the cities. In the past, state and federal assistance for such services has been provided to urban areas through a series of programs that have differed from those in the bush.

#### Municipal Water and Sewer Grants

Communities in Alaska can receive financial assistance for installing water supply and waste disposal systems through the State Water and Sewer Construction Grants program. Through this program, both federal and state funds are available for municipal sewage treatment and disposal, interceptor sewers, sewage

collection and water supply. Communities receiving these funds are requested to provide matching funds in varying proportions. This "matching fund" proviso of the Construction Grants program has, naturally, limited its success and impact in bush Alaska.

#### Bush Programs

Until 1970, the only active program for providing sanitation services in rural Alaska was the U.S. Public Health Service, Indian Health Service, Office of Environmental Health. In the late 1960's Senators Ted Kennedy and Ted Stevens toured rural Alaska and were appalled at the lack of sanitation services in bush villages. Their reaction to this sorry condition was the promotion of a combined federal and state program to answer the need for rural sanitation services.

The federal program was the Alaska Village Demonstration Project (AVDP).<sup>1</sup> The state program was the Village Safe Water (VSW) program. Simply stated, AVDP was to construct two projects which were to demonstrate the best way to supply rural sanitation services; the State was to follow this up by building sanitation systems that were developed

by AVDP.

## THE VILLAGE SAFE WATER ACT

The Village Safe Water Act of 1970 was passed for the purpose of providing "safe water and hygienic sewage disposal facilities in villages in the State," and "to assure that there will be at least one facility for safe water and hygienic sewage disposal in each village." The Act stipulates that each facility will provide at least a safe water supply, means for sewage disposal, and bathing and laundry services. A village is defined as "an unincorporated community which has between 25 and 600 people residing within a two-mile radius; or a second class city." The VSW act is administered by the Alaska Department of Environmental Conservation (ADEC).

A village receiving a VSW project is not required to contribute toward costs of construction. The State may "provide for construction by contract or through grants to public agencies or private non-profit organizations, or otherwise."

When a VSW facility is completed, the recipient village must be given title to it. The village must agree to accept ownership of the facility and be responsible for its operation and maintenance. The State

<sup>1</sup>The Alaska Village Demonstration Project was treated in some depth in Volume 7, number 2, The Northern Engineer.

**TABLE 1**  
Villages Receiving VSW Facilities

Village	Location		Pop.	Mean Jan. Temp, F°	Mean Annual Temp, F°
	N. Lat.	W. Long.			
Northway	62°58'	141°56'	40	-24°	+22°
Chevak	61°32'	165°35'	447	+2°	+29°
Nulato	64°43'	158°06'	330	-16°	+25°
Selawik	66°36'	160°00'	521	-16°	+22°
Alakanuk	62°41'	164°34'	512	-3°	+28°
Pitkas Point	62°02'	163°67'	85	-3°	+28°
Koyukuk	64°53'	157°42'	124	-16°	+25°
Beaver	66°22'	147°24'	101	-20°	+30°
Kongiganak	59°52'	163°02'	200	+2°	+30°

may assist a village with operation and maintenance expenses when the local governing body lacks sufficient financial resources.

#### VSW CONSTRUCTION EXPERIENCES

##### Description of Projects

By the end of fiscal year 1977, Village Safe Water sanitation facilities will have

been constructed in nine Alaska villages. Table 1 lists the nine villages and the data on them concerning population, location and climate.

The VSW project goals in all nine of the villages will be the construction of *central* sanitation facilities. A central facility is a building from which the various sanitation services are dispensed (e.g., a faucet for filling a water bucket or barrel, a dumping bin for "honey buck-

ets," clothes washers and dryers, showers, and rest rooms). The central facility concept contrasts with that of providing these services to individual homes through a piped distribution and collection system. In some communities, factors such as permafrost conditions, climate and community layout might make a central facility preferable to community distribution and collection systems.

##### Northway and Chevak

At Northway and Chevak, existing community watering points were improved and laundry equipment and showers were added. Wastewater from the Northway facility (containing no toilet waste) is discharged to a small natural pond. Chemical toilets are emptied into a Federal Aviation Administration sewage treatment system several miles away. At Chevak, wastewater is discharged to a sewage lagoon. These facilities were designed and constructed under contracts administered by ADEC.

##### Nulato, Selawik and Alakanuk

The sanitation facilities in these villages were the first full fledged ones constructed under the VSW program.

In each village, a new state school and the VSW facility were designed and constructed under joint contracts administered by the Alaska Department of Public Works. All three VSW facilities were patterned after the Alaska Village Demonstration Projects in Emmonak and Wainwright. The VSW facilities are two-storied structures approximately 55 feet square, built on piles. They contain washers and dryers, showers, saunas, rest rooms, solid waste disposal bins, honey bucket dumps and a watering point.

In all three facilities, water treatment is by alum coagulation/flocculation, rapid sand filtration, and chlorination. The water treatment plants are standard Met-Pro physical/chemical package plants with a 14,000 gpd capacity.

The sewage treatment plants are also 14,000 gpd Met-Pro physical/chemical package plants, in which the unit processes are alum coagulation/flocculation, carbon sorption, rapid sand filtration, and chlorination. Treated effluent is dis-

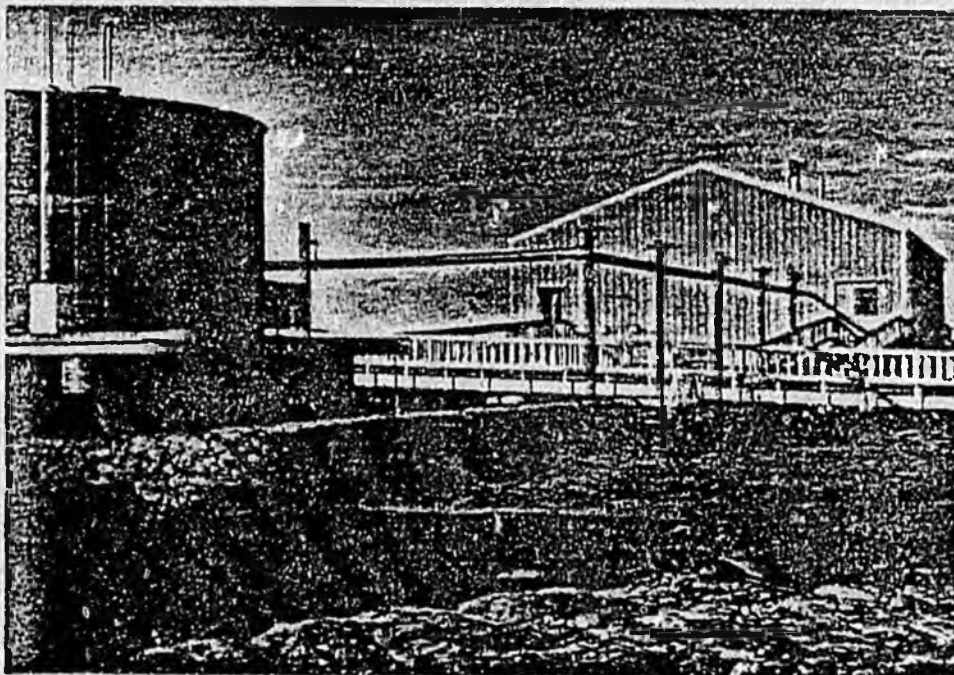


FIGURE 1. Alakanuk Village Safe Water Facility.

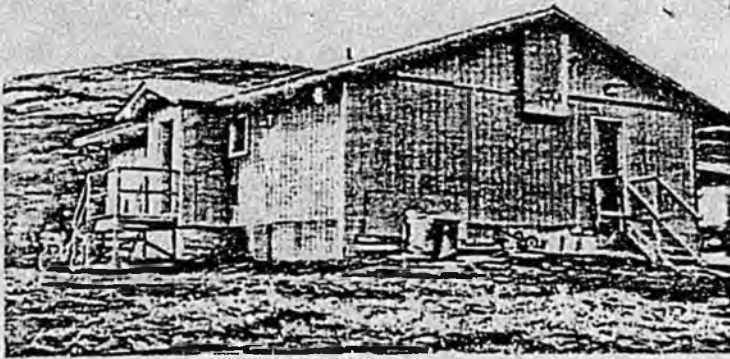


FIGURE 2. Pitkas Point Village Safe Water Facility.

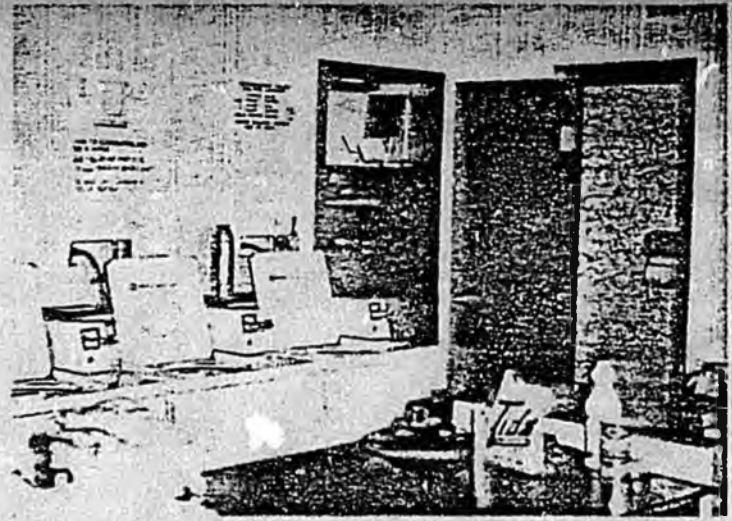


FIGURE 3. Pitkas Point Laundry Room.

charged to the land surface through an elevated, insulated and heated conduit.

Sludge from both the water and sewage treatment plants is dewatered by centrifugation and incinerated. Solid waste from the solid waste collection bins is also incinerated.

In each facility the primary source of building heat and heat for the dryers is a heat exchanger on the incinerator stack. A hot water boiler is the secondary heat source, and a hot air furnace is the "last ditch" source of building heat in case the incinerator and boiler fail or are inadequate. The incinerator, boiler and hot air furnace are interconnected through complex control systems which have been very difficult to keep operating properly.

At Nulato neither one of the treatment plants has performed consistently well since the facility was completed in November of 1974. Sludge build-up has caused severe reductions in the capacities of both plants. Since the main water treatment requirement is the removal of iron (28 mg/l) and manganese (5 mg/l), the physical/chemical process that was installed was probably not the best choice. At Selawik and Alakanuk, raw water is obtained from surface sources, and the treated water has been of good quality since the facilities were completed in October 1975 and December 1975, respectively. The sewage treatment plants are also operating well.

Pitkas Point, Koyukuk, Beaver and Kongiganak

The Pitkas Point project was completed in February, 1976. This facility is built with relatively simple mechanical and structural systems compared to the big and sophisticated installations at Alakanuk, Selawik and Nulato. The structure is wood frame with about 1300 square feet of floor space. It provides a watering point, honey bucket dump, washers and dryers, rest rooms, showers and saunas.

Raw water from a creek bed collection gallery is filtered (when raw water quality requires it) through a bed of sand and activated carbon; then it is chlorinated and fluoridated. Sewage receives secondary biological treatment in Multi-Flo package plants. These plants consist of an aeration chamber and a filter membrane for solids separation. Treated effluent is discharged to an underground leach field.

Unique construction methods were used at Pitkas Point. The State, through ADEC, gave a grant to the village. The funds were used to hire consulting engineers who were to design and manage the construction of the Pitkas Point facility. ADEC helped the village negotiate and administer the consulting contracts.

The projects at Koyukuk, Beaver and Kongiganak are being patterned after the relatively successful Pitkas Point project.

## COSTS

Table 2 summarizes capital construction costs for VSW projects to date. The costs shown include both design and construction. The figures for Koyukuk, Beaver and Kongiganak are preliminary estimates.

## OPERATION AND MAINTENANCE

The construction of any utility system, especially in the relatively harsh environment of rural Alaska, is money wasted unless provisions are made for the system to be properly operated and maintained. Most, if not all, villages lack the necessary resources to administer, manage, operate and maintain even a minimum VSW facility (or any other utility system for that matter) without continuing outside assistance.

A facility to provide the services specified by the Village Safe Water Act must contain relatively sophisticated equipment and appliances. Since public health is at stake, water and waste treatment systems must be kept operating properly at all times. Hence, at least one full-time trained and paid maintenance person must attend every VSW facility.

Virtually all of the maintenance people have to come from the villages where VSW plants are installed because "outsiders" are usually reluctant to take up residence in remote villages. Since people with the training and experience neces-

**TABLE 2**  
Capital Construction Costs For VSW Projects

Village	Cost (in thousands of dollars)
Northway	60 (VSW contribution)
Chevak	75 (VSW contribution)
Nulato	860
Selawik	1100
Alakanuk	1000
Pitkas Point	350
Koyukuk	440
Beaver	450
Kongiganak	550

sary to operate and maintain a VSW facility are usually not available locally, an elaborate, extensive and ongoing program for training of plant operators is required.

A continuous and generous flow of revenue is required to meet the operation and maintenance expenses of VSW facilities. In addition to the plant operator(s)' salary, there are treatment chemicals, electricity, fuel and replacement parts to buy.

Table 3 lists the estimated annual operating budgets (FY 76 figures) for VSW facilities completed as of February, 1975. The figures in Table 3 exclude amortization of capital costs.

Sources of revenue in the villages are limited. Individuals who use the VSW facilities will pay fees, but the fees cannot be so high that people can no longer afford to use the facilities. Up to \$2000 dollars per month might be raised through users' fees in larger villages (400 to 500 residents) and proportionately less in smaller towns. Public Health clinics, some owned by the U.S. Public Health Service and some owned by the villages, might receive water supply and waste disposal services from VSW facilities and thus pay users' fees, but the revenue collected in this way would not exceed more than a few hundred dollars a month. Fees paid for school water and

**TABLE 3**  
Operating Budgets For VSW Facilities

Villages	Annual Operating Budget (FY 76) (thousands of dollars)
Northway	28.0
Chevak	37.5
Nulato	109.0
Selawik	109.0
Alakanuk	109.0
Pitkas Point	46.0

sewer services represent a third source of revenue which could routinely amount to about 25 per cent of the VSW facility operating budget. So, as a general rule, more than half of the money needed to operate VSW facilities will have to come from outside the villages.

### CONCLUSION

The Village Safe Water program grew out of recognition of the critical need for adequate sanitation services in rural Alaska. Providing such services involves two major efforts: (1) capital construction, and (2) operation and maintenance. Of the two activities, operation and maintenance have proved to be the more difficult in the VSW program.

The technological problems associated with providing water supply and waste disposal services in the Arctic are indeed unique and challenging. But by far less tractable are long term operation and maintenance problems such as finding enough money to pay the bills, keeping mechanical equipment operative at remote sites, and managing personnel from great distances without reliable communications.

Without dependable provisions for operating and maintaining sanitation facilities in rural Alaska, constructing them is wasted effort.

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Again, we are grateful to Dr. Dan Smith, Head of the Northern Technology Centre, for allowing us to publish this article which was originally given at the Utilities Delivery Symposium last spring.



Table 11 -

CONSTRUCTION & OPERATING COSTS FOR CENTRAL FACILITIES

EPA

WSW

Community	Population	Year Completed	Capital Construction Cost (Values in thousands of dollars)	Annual Operating(1) Budget 1977
Wainwright I	341	1972	910.0	46.5
Wainwright II		1976	1516.0	N/A
Emmonak		1976	780.0	75.6
				(1973-76)
Northway	40	1974	60(2)	31.4
Chevak	447	1974	75(2)	39.5
Nulato	330	1976	860.0	85.7
Selawik	521	1976	1100.0	113.3
Alakanuk	512	1976	1000.0	85.0(3)
Pitkas Point	85	1976	350.0	60.4
Koyukuk	124	1977	499.6	60.0(3)
Beaver	101	1977	480.4	34.8(3)
Kongiganak	200	1978	950(3)	76.1(3)
Tanana	450	1979	925(3)	68.9(3)
Council	25	1978	105.5(3)	9.0(3)

- (1) Does not include amortization
- (2) State of Alaska contribution
- (3) Estimated

(4) Capital costs include design, const, materials, transport, agency personnel.

discuss a typical facility only - give services provided, typical costs, O&M personnel, costs, services costs.

See over

# ALASKA FEDERATION OF NATIVES, INC.

550 West 8th Avenue • Anchorage, Alaska 99501 • Phone 907-274-3611



January 16, 1978

RECEIVED

JAN 18 1978

Mr. Ernst W. Mueller  
Commissioner  
Dept. of Environmental Conservation  
Pouch 0  
Juneau, Alaska 99811

DEPARTMENT OF  
ENVIRONMENTAL CONSERVATION

Dear Mr. Mueller;

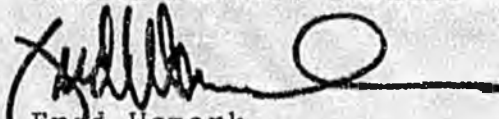
Thank you for the excellent publication on Village Sanitation in Alaska. We at Alaska Federation of Natives, Inc. and the twelve regional health directors are very impressed with the work done in this area. This publication will go a long way in getting the best possible facilities for our rural areas.

The regional health directors, and myself, found working with your office a real pleasure. We especially would like to commend Greg Capito, on his brief but complete presentations he has made to our group. His manners and professionalism is a tribute to you and your office. Mr. Capito, will always be welcome to our meetings and will be well received by the villages he helps.

Once again thank you,

Very Truly Yours,

ALASKA FEDERATION OF NATIVES, Inc.  
Health Affairs Technical Assistance

  
Fred Wemark  
Director

cc: Greg Capito

FW/sb

# ALASKA FEDERATION OF NATIVES, INC.

*Integrity. Pride in Heritage. Progress*

April 19, 1977

The Honorable Jay Hammond  
Governor  
State of Alaska  
Pouch A  
Juneau, Alaska 99811

Re: Village Safewater

Dear Governor Hammond:

House Concurrent Resolution #110, adapted by the Ninth Alaska Legislature, suggested the formation of an advisory committee for the State's Village Safewater (VSW) Program. This group, consisting of representatives of the 12 Native Regional Health Corporations, would advise and assist the Alaska Department of Environmental Conservation in the administration of this rural sanitation program.

At a regularly scheduled meeting of the Association of Regional Health Directors (ARHD) in Anchorage on February 24, Senior Planner Gregory Capito of the Village Safewater Program, made a presentation to the group. His main purpose was to find out if the A.R.H.D. would act in an advisory capacity for the VSW program. Mr. Capito presented the advantages and disadvantages of being an advisory board. The Association of Regional Health Directors unanimously endorsed this idea and requested that the VSW program be expanded to provide sanitation services to remote Alaskan communities.

It is our sincere hope that through this advisory group, we can work together to address the critical sanitation problems facing rural Alaska.

Yours truly,

ALASKA FEDERATION OF NATIVES, INC.  
Health Affairs Technical Assistance

Fred Wemark  
Director

cc: \* Greg Capito  
A.R.H.D.

RESOLUTION

77-02

\*\*\*\*\*

WHEREAS, the intent and purpose of the Office of Environmental Conservation is to establish and insure standards of water quality and environmental sanitation; and

WHEREAS, the Village Safewater Program is a mechanism whereby the Office of Environmental Sanitation can assist local communities in meeting standards established by the Office;

NOW THEREFORE BE IT RESOLVED, that the Association of Regional Health Directors advises the State Legislature of the importance of maintaining within the Office of Environmental Conservation the capacity of assisting local communities of meeting standards of environmental health by continuing the Village Safewater Program through the Office; and

BE IT FURTHER RESOLVE that the transfer of Village Safewater Program to the Division of Transportation and Public Facilities is likely to reduce the effectiveness of the Office in promulgating acceptable standards of environmental sanitation.

---

Robert Clark, Chairman

---

Fred Wemark, AFN, INC.

Acted upon and passed by unanimous vote on April 15, 1977.

# STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION

JAY S. HAMMOND, GOVERNOR

POUCH 0 - JUNEAU 99811

February 18, 1977

Bob Worl, Executive Director  
NORTH SLOPE BOROUGH HEALTH DEPARTMENT  
P.O. Box 69  
Barrow, Alaska 99723

Dear Bob:

RE: Rural Sanitation

Please recall the recent meetings with you or your staff concerning two or three Village Safe Water (VSW) Facilities to be built this year in Alaska Native villages. As discussed earlier, we would like you to help us select a village in your area most in need of a VSW project.

Since 1970, the Department of Environmental Conservation has sponsored construction of nine VSW facilities. Hence, we have some experience to share with you that might help in selecting a village.

First of all, remember that we build central facilities where people come to get water, deposit waste, bathe and do laundry; as opposed to piped water and sewer service to each house usually installed by the U.S. Public Health Service. Physical features are important in deciding whether a piped system or central facility is appropriate. For example, ice-rich permafrost or swampy terrain make it technically and economically difficult to construct a conventional piped system. Also, in a village spread out along both sides of the river, a piped system may be too difficult and expensive to install. Therefore, villages in your region which possess these types of physical characteristics may be better suited for a centralized VSW system.

To minimize duplication of effort, please do not consider those villages in your region which have received, or are likely to receive, HUD housing and thus PHS water and sewer systems. Also, please note that a VSW facility should not be constructed in a village where a PHS system already exists.

The size of the community is also important. The Village Safe Water Act, as it will probably be amended, defines "village" as an incorporated or unincorporated community which has between 25 and 600 people residing within a two mile radius.

Perhaps the single most important factor to consider is how a village obtains its water supply. For example, melting ice or collecting rain for drinking water is more inconvenient and unsafe than having a good quality, year round stream close by.

# YUKON-KUSKOKWIM HEALTH CORPORATION

RECEIVED

JAN 18 1979

*a spike of interest?*

P. O. Box 528  
Bethel, Alaska 99559  
(907) 543-3321

January 9, 1979

## DEPARTMENT OF ENVIRONMENTAL CONSERVATION

The Honorable George H. Hoiman  
State of Alaska, State Legislature  
Fouch V  
Juneau, Alaska 99811

Dear Senator Hoiman:

A copy of Ernst W. Mueller's letter to you, dated December 15, 1978 was forwarded to Jim Martin, Deputy Director of the Yukon Kuskokwim Health Corporation. Jim passed the letter on to me because one of my departments is involved with the problems of safe water and sanitation in the villages. In attempting to provide information and offer advice, the department also receives complaints and tries to help villages with the many water and sanitation problems they have.

As you are well aware efforts to provide VSW facilities in the past have met with only moderate success. *you check!* The past pattern of failure, or partial failure, seems likely to be repeated as a result of the new water and sewer bond bill (S.B. 449) which was approved on November 7, 1978. I assiduously second the comments made by Ernst Mueller regarding the need for comprehensive planning.

I am especially concerned that in spite of the construction of facilities in the so many villages still lack the minimum necessity of safe water to drink and disposal of their sewerage, especially when the lack is due to poor planning. I like to present the following points for your attention.

1. The importance of a VSW feasibility study for each village cannot be over emphasized. This is especially important if no funds for repair, maintenance or operation are to be forthcoming.
  - a. The planned facility should not require more funds for upkeep than the village can reasonably provide - or are willing to provide.
  - b. The facility should not require a larger maintenance crew than the village can supply.
  - c. The facility should not require greater skill to operate, than the village has available.
  - d. The facility should not require more power to operate, than the village can produce.
  - e. The facility should have been tested regarding its suitability to the climate and terrain of the individual village.

2. Providing facilities with no regard to the need for on-going upkeep of the facilities is at best, a half measure towards alleviation of the problem. The upkeep is a separate entity which perhaps should be covered by a second bill which would provide for:

- a. The cost of major repairs.
- b. A subsidy which may be based on the ability of the village to maintain the facility.
- c. On-going training programs for maintenance crews.

I hope these comments and observations will be of interest to you and hope you will contact me if I can be of help at any time.

Sincerely yours,

*Jillian L. Loschky*

Jillian L. Loschky  
Assistant Health Director

JL/ds

cc: Ernst W. Mueller  
Jim Martin

*give dues!*

# YUKON-KUSKOKWIM HEALTH CORPORATION

P. O. Box 528  
Bethel, Alaska 99559  
(907) 543-3321

January 19, 1979

The Honorable George H. Hohman  
State of Alaska, State Legislature  
Pouch V  
Juneau, Alaska 99811

Dear Senator Hohman:

With reference to a letter I sent you, dated January 9, 1979, I would like to retract comments I made in paragraph two and point one, of that letter.

I erroneously used the phrase "VSW Facilities," when in fact I should have identified Public Health Service installations, which are actually the facilities presenting problems in the past. Greg Capito, Senior Planner, of the Village Safe Water Department of Environmental Conservation, called me today. Having seen my letter to you, he was understandably concerned to find the VSW project had been unjustly vilified. All the VSW facilities are in good working order.

Please accept my regrets for the error.

Sincerely, yours,

*Jillian F. Loschky*  
Mrs. Jillian F. Loschky  
Assistant Health Director

cc: Greg Capito  
Jim Martin

Greg -

1/9/71

I, too, apologize  
for the wrong use of  
terminology the  
result of which was  
to unfairly criticize  
your program.

I reviewed the  
letter Jillian Koschky  
wrote to Sen. Hornum  
and failed to catch  
the mistake myself.

You've always been most  
cooperative and certainly we  
have no quarrel with you. Jim [unclear]

# YUKON-KUSKOKWIM HEALTH CORPORATION

P. O. Box 528  
Bethel, Alaska 99559  
(907) 543-3321

January 19, 1979

RECEIVED  
JAN 22

Department of  
Environmental Conservation

Mr. Greg Capito  
Department of Environmental Conservation  
Pouch O  
Juneau, Alaska 99811

Dear Greg:

When it comes to "making friends and influencing people," I am afraid I may have already lost you.

I realize ignorance of the law is no excuse, but it is the only one I have. I did not realize VSW and PHS were totally unconnected, or at least I did not connect the two; even when working on the subject. I believe this is my fifth or sixth week in Alaska and this job. I am juggling several programs and trying not to make the sort of stupid mistake I made here.

I enclose a letter I have written retracting the use of the phrase, VSW facilities. If you wish me to make any further reparation, or acts of contrition, please let me know. You can imagine I already feel very dull-witted.

Meanwhile, I send my abject apologies.

Sincerely yours,

*Jillian*

Mrs. Jillian Loschky  
Assistant Health Director

JL:al

ENCLOSURE

February 18, 1977

Finally, the interest or initiative a village has demonstrated in correcting or alleviating local waste disposal problems is another point to consider when selecting a candidate village.

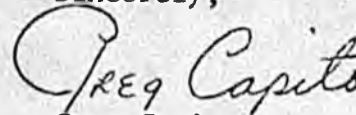
Keep in mind that there is flexibility in the VSW program. If a facility providing less than all the services specified in the VSW act is desired by a village, the following options may be available: 1) A central watering point; 2) A central watering point plus a waste disposal plant or 3) Option (2) plus bathing and/or laundry services.

We hope that by the time each regional health organization completes the screening process and selects a village, the Association of Regional Health Directors or similar group will agree to act in an advisory capacity for the VSW program. This group will help us prioritize the villages selected, using the guidelines outlined above. Department of Environmental Conservation engineers will then conduct field investigations and on-site inspections of the top two or three villages and discuss the projects with village leaders. This way the top selections are either confirmed or rejected. If rejection occurs, the process is repeated with the next village on the list.

Before you begin the screening process, please read carefully the enclosed material. The Village Safe Water Act will clearly define the purpose, objectives and limitations of our program. The case studies report from the Northern Engineer will give you a better idea of the sanitation systems we've constructed in the past.

We look forward to your active participation in this selection process and to being advised of your choice by March 11. Please feel free to contact me at 465-2687 in Juneau if you have any questions or comments.

Sincerely,



Greg Capito  
Senior Planner  
Village Safe Water

Enclosures

cc: Executive Directors of the  
Regional Health Corporations

SOUTHEAST ALASKA  
REGIONAL HEALTH CORPORATION

GOLDSTEIN BUILDING, ROOM 414  
130 SOUTH SEWARD STREET  
JUNEAU, ALASKA 99801  
PHONE 907-586-3613

April 12, 1977

RECEIVED  
APR 14 1977

Department of  
Environmental Conservation

Mr. Gregory Capito, Senior Planner  
Village Safe Water  
Alaska Department of  
Environmental Conservation  
Pouch O  
Juneau, Alaska 99811

Dear Mr. Capito:

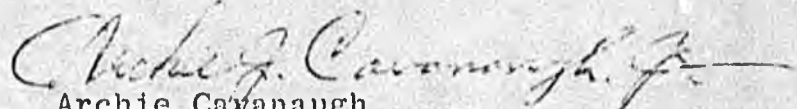
Please forgive the extended delay in responding to your letter of March 29, 1977 requesting our input in the Southeast community selection for your village safe water project.

Judging from our past community profiles, personal evaluations and on-site visits, it has been determined that the villages of Tenakee and Kasaan are in most need of your services. These two Southeast villages lack adequate water facilities for their everyday needs. It is also my understanding that the PHS has had very little, if any, involvement with these communities as far as constructing water facilities there.

I hope this information will assist you in the final selection process.

Again, forgive the delay, I did not receive your letter until a few days ago.

Sincerely,

  
Archie Cavanaugh  
Director of Planning

AC/mh

# MAUNELUK ASSOCIATION

P. O. Box 256  
Kotzebue, Alaska 99752

Phone  
(907) 442-3311  
or  
(907) 442-3313

March 8, 1977

Greg Capito  
Senior Planner  
Village Safe Water Act  
Department of Environmental Conservation  
Pouch O  
Juneau, Alaska 99811

RECEIVED  
MAR 14 1977

Department of  
Environmental Conservation

Dear Greg:

This letter is in response to your letter dated February 18, 1977 regarding the Village Safe Water Act.

The village we would like to submit for the program is Kobuk. At the present time it has no city water or sewage system. This leaves the residents of Kobuk without any means of showering, washing clothes and sewage treatment; all of which are considered vital in the maintenance of adequate health standards.

Due to being located near a large deposit of bornite and other minerals Kobuk is expected to grow in the foreseeable future, making it even more imperative that a safe-adequate water-sewage treatment system be installed.

The village of Kobuk is interested in option three of the Village Safe Water Act.

Sincerely,

MAUNELUK ASSOCIATION

Dennis J. Tjepelman, President

*Marty Strauss*

Marty Strauss  
Environmental Planner

cc:Mauneluk Board of Directors  
Miles Cleveland  
Tony Bernhardt  
Chuck Greene  
Joe Ryan

MS/ga

MEMBER VILLAGES

Ambler, Buckland, Deering, Kiuna, Kualina, Kobuk, Kotzebue, Nautak, Noorvik, Selawik, Shungnak

MAYOR'S OFFICE  
EXT. 211  
ADMINISTRATION & FINANCE  
EXT. 210  
PUBLIC WORKS DEPT.  
EXT. 249  
PLANNING DEPT.  
EXT. 244

NORTH SLOPE BOROUGH  
P. O. BOX 69  
BARROW, ALASKA 99723  
907 - 852-2611

ASSESSING  
EXT. 230  
HOUSING AGENCY  
EXT. 245  
HEALTH AGENCY  
EXT. 241  
ACCOUNTING  
EXT. 237

March 14, 1977

Mr. Greg Capito  
Department of Environmental Conservation  
Village Safe Water  
Pouch O  
Juneau, Alaska 99811

Dear Mr. Capito,

In response to your letter of February 18, 1977, I would like to submit the village of Point Hope as our choice for a village water project.

RECEIVED  
MAR 15 1977

Department of  
Environmental Conservation

Sincerely yours,

*Elise Patkotak*

Elise Patkotak  
Program Administrator  
North Slope Borough  
Health Program



north pacific rim  
native corporation

March 2, 1977

RECEIVED  
MAR 07 1977

Department of  
Environmental Conservation

Greg Cofito, Senior Planner  
Village Safe Water  
Dept. of Environmental Con-  
servation  
Pouch O  
Juneau, Alaska 99811

Dear Greg:

Thank you for your letter of February 18, 1977 and your presentation to the Association of Regional Health Directors on February 24, 1977.

Herewith is the information you requested:

We have only three villages in the Chugach Region: English Bay, Port Graham, and Tatitlek. All of these have Public Health Service water and sewer systems which, though in need of improvement, are basically adequate in comparison to other villages. It appears, therefore, that none of our fillages fit the conditions of, or are in need of, the Village Safe Water Program.

I wish you well in your efforts to administer and plan this program in the direct and forthright manner you have demonstrated in the past.

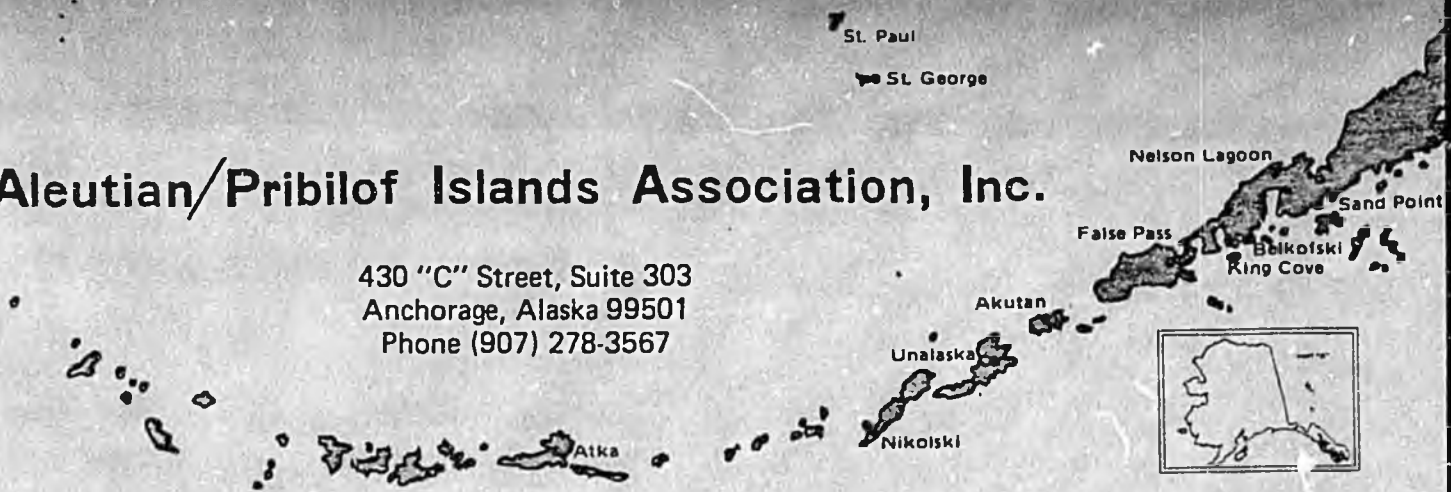
Sincerely,

*Gregg Brelsford*  
Gregg Brelsford  
Health Director

vh

# Aleutian/Pribilof Islands Association, Inc.

430 "C" Street, Suite 303  
Anchorage, Alaska 99501  
Phone (907) 278-3567



HEALTH DEPARTMENT

March 17, 1977

Mr. Greg Capito  
Senior Planner  
Village Safe Water  
State of Alaska  
Department of Environmental Conservation  
Pouch 0  
Juneau, Alaska 99811

**RECEIVED**  
MAR 21 1977

Department of  
Environmental Conservation

Dear Greg,

Thank you for the informational letter concerning Village Safe Water Facilities to be built in Alaska.

After reviewing your letter I have discovered that the villages in our region will not be eligible for your project as they are requesting housing programs which would involve HUD and PHS water and sewer systems.

Yours truly,

*Marie Sipary*  
Marie Sipary  
Health Director

MS/rc

cc: Files

# YUKON-KUSKOKWIM HEALTH CORPORATION

AFFILIATE OF THE ALASKA FEDERATION OF NATIVES

P. O. Box 528  
Bethel, Alaska 99559  
(907) 543-2506  
(907) 543-2507

March 11, 1977

RECEIVED

MAR 14 1977

Department of  
Environmental Conservation

Mr. Greg Capito  
Senior Planner  
Village Safe Water  
State of Alaska  
Dept. of Environmental Conservation  
Pouch 0  
Juneau, Alaska 99811

Dear Greg:

RE: Rural VSW Selections

This is in answer to assist you select a village in our area most in need of a VSW project.

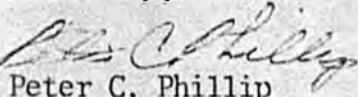
During the Native Health Board meeting last week, I presented your request to the Board members. I also made a short explanation of the project to be involved. The Board selected the following villages but not prioritized. They said for you to prioritize and make the selection after you have made the field observations.

Eek	population:	199
✓ Newtok		152
Kipnuk		324
Sheldons Point		138

All of the above are in need of a VSW project. When you have decided to travel to the above villages, let me know and I will be glad to travel with you to act as an interpreter. When we get to those villages we will be able to get all the information necessary for both our offices and also for your selection.

The Native Health Board was pleased you requested their assistance in the selection of a village, especially to help improve the health needs of the villages.

Sincerely,



Peter C. Phillip  
Community Liaison

cc: Alvin Ivanoff,  
YKHC Executive Director

Files

PCP:lpn

# STATE OF ALASKA

JAY S. HAMMOND, GOVERNOR

## DEPT. OF ENVIRONMENTAL CONSERVATION

POUCH 0 - JUNEAU 99811

April 19, 1977

Mr. Bob Worl, Executive Director  
NORTH SLOPE BOROUGH HEALTH  
DEPARTMENT  
P.O. Box 69  
Barrow, Alaska 99723

Dear Bob:

RE: Rural Sanitation

The Village Safe Water (VSW) program will construct two or three new sanitation facilities this year in rural Alaskan communities. At an April 13 meeting in Kotzebue, the Association of Regional Health Directors, (ARHD), acting as the VSW advisory board, prioritized a list of eight rural villages. A summary of the group's recommendations follows:

<u>REGIONAL HEALTH CORP.</u>	<u>VILLAGE</u>	<u>ARHD PRIORITY</u>
Norton Sound Health Corp.	Council	1
Tanana Chiefs Health Authority	Tanana	2
Bristol Bay Health Authority	Pilot Point	3
North Slope Borough Health Dept.	Nuiqsut	4
Cook Inlet Native Association	Ninilchik	5
Copper River Health Dept.	Mentasta	6
Yukon-Kuskokwim Health Dept.	Nightmute	7
Maneluk Association	Kobuk	8

The prioritization process was done by examining background data, including information relating to the difficulty each village faces in obtaining a reliable source of clean water. This information was then placed in perspective by evaluating each community's prospects for sanitation improvements. For example, Council was placed at the top of the list because of the village's undeveloped source of supply and there were no improvements planned. In contrast, Kobuk, also with an undeveloped source, was placed at the bottom of the priority list because the Public Health Service has immediate plans to construct a sanitation system under provisions of the Indian Health Care Improvement Act, P.L. 94-437.

Tanana and Pilot Point were placed 2 and 3 on the priority list. The Village of Tanana uses groundwater with a high iron content. It was also pointed out that this village of nearly 500 people may not receive a PHS project until FY 80 or 81. Pilot Point has a difficult water supply problem with a tundra lake as the source. Prospects of a PHS project for Pilot Point appear dim until FY 79.

The advisory group carefully deliberated the existing health problem in the Village of Ninilchik. Here, the source of supply contains bacterial contamination during much of each year. The board placed Ninilchik number four on the priority list and petitioned appropriate federal and state agencies to investigate the health problem and take appropriate action to correct the immediate health hazard. To address the long term sanitation needs of Ninilchik, the board recommended that scheduled improvements for the village planned by PHS for FY 80, be accelerated to protect the health and welfare of residents and tourists.

Nuiqsut, Mentasta and Nightmute were recognized as villages with water supply problems. However, PHS project planning for these communities is scheduled to begin by FY 77 or 78.

The advisory board also considered prioritizing Kassan, a late entry submitted by the S.E. Alaska Regional Health Corporation. But since the board felt Kassan would not displace the top three villages, there was no need to consider them this year.

Now that the prioritization process is completed, the Dept. of Environmental Conservation, working through the appropriate Regional Health Corporations, will contact the top 2 or 3 villages. This will be done to determine what type of facilities the people in these communities would like, and the technical and economic feasibility of constructing, operating and maintaining these systems.

In order to keep the board advised on the candidate selection process, written reports will be mailed to each member of the ARHD. An update could also be presented at the next regularly scheduled Association meeting, if the organization so desires.

Thank you for your active participation in the candidate selection process. We welcome your increased involvement in the VSW program.

Sincerely yours,



Gregory Capito  
Senior Planner  
Village Safe Water

The Water Programs Division is responsible for conserving and enhancing the state's marine and fresh water environment. Activities include control of liquid waste discharges, surveillance of water quality, management of the state/federal water supply and sewage treatment facility construction program and provision of safe water facilities and supplies.

The fiscal 1976 budget appropriation is almost \$1.2-million, including \$167,000 in federal funds, while the staff includes 24 full-time and two part-time employees. An additional full-time position has been requested by the Department of Environmental Conservation for fiscal 1977.

Responsibilities in the Terrestrial Programs Division encompass evaluating the environmental impact of development activities on the state's land and air resources. Activities include regulation of air pollution, solid waste management, control of hazardous substances and review of development activities in permafrost rich areas.

The fiscal 1976 budget appropriation is approximately \$569,000 including \$190,000 in federal funds and covers a staff of 14. A reduction of three positions is anticipated in the fiscal 1977 budget request.

The Program Coordination Division develops broad environmental plans to ensure consistency in department actions, coordinate all permit activity and monitor the development of federal and state regulations. It has commenced preparation of a comprehensive environmental plan for the state.

The fiscal 1976 budget appropriation is \$235,000 including almost \$67,000 in federal funds. There are four employees and a request for an additional position has been made for fiscal 1977.

A full range of administration and technical support activities is provided to the department through the Management Services Division. It is also the main administrative contact with other state agencies. The fiscal 1976 budget appropriation is approximately \$793,000 including almost \$120,000 in federal funds. There are 24 employees and a request has been made for two additional positions in fiscal 1977.

A liaison activity in the department employs nine people with a fiscal 1976 budget appropriation of \$461,000. A request has been made for an additional five employees in fiscal 1977 although only five of the nine positions now authorized are filled.

## Evaluation

The department operates at a highly efficient level. However, its activities are duplicated by other state agencies in several instances. In some cases, current staff is not adequate to handle existing work loads and questions of construction policy have been raised in regard to the ability of local villages to operate and maintain certain types of facilities.

## Recommendations

254. Discontinue construction of village safe water projects.

The village safe water program is financed completely by the state and there is substantial concern about its effectiveness. The program applies to villages with population ranges of from 25 to 600 persons. Approximately \$5-million has been spent to complete eight projects and three more are scheduled.

February 18, 1977

William Dann, Executive Director  
NORTON SOUND HEALTH CORPORATION  
P.O. Box 966  
Nome, Alaska 99762

Dear William:

RE: Rural Sanitation

Please recall the recent meetings with you or your staff concerning two or three Village Safe Water (VSW) Facilities to be built this year in Alaska Native villages. As discussed earlier, we would like you to help us select a village in your area most in need of a VSW project.

Since 1970, the Department of Environmental Conservation has sponsored construction of nine VSW facilities. Hence, we have some experience to share with you that might help in selecting a village.

First of all, remember that we build central facilities where people come to get water, deposit waste, bathe and do laundry; as opposed to piped water and sewer service to each house usually installed by the U.S. Public Health Service. Physical features are important in deciding whether a piped system or central facility is appropriate. For example, ice-rich permafrost or swampy terrain make it technically and economically difficult to construct a conventional piped system. Also, in a village spread out along both sides of the river, a piped system may be too difficult and expensive to install. Therefore, villages in your region which possess these types of physical characteristics may be better suited for a centralized VSW system.

To minimize duplication of effort, please do not consider those villages in your region which have received, or are likely to receive, HUD housing and thus PHS water and sewer systems. Also, please note that a VSW facility should not be constructed in a village where a PHS system already exists.

The size of the community is also important. The Village Safe Water Act, as it will probably be amended, defines "village" as an incorporated or unincorporated community which has between 25 and 600 people residing within a two mile radius.

Perhaps the single most important factor to consider is how a village obtains its water supply. For example, melting ice or collecting rain for drinking water is more inconvenient and unsafe than having a good quality, year round stream close by.

February 18, 1977

Finally, the interest or initiative a village has demonstrated in correcting or alleviating local waste disposal problems is another point to consider when selecting a candidate village.

Keep in mind that there is flexibility in the VSW program. If a facility providing less than all the services specified in the VSW act is desired by a village, the following options may be available: 1) A central watering point; 2) A central watering point plus a waste disposal plant or 3) Option (2) plus bathing and/or laundry services.

We hope that by the time each regional health organization completes the screening process and selects a village, the Association of Regional Health Directors or similar group will agree to act in an advisory capacity for the VSW program. This group will help us prioritize the villages selected, using the guidelines outlined above. Department of Environmental Conservation engineers will then conduct field investigations and on-site inspections of the top two or three villages and discuss the projects with village leaders. This way the top selections are either confirmed or rejected. If rejection occurs, the process is repeated with the next village on the list.

Before you begin the screening process, please read carefully the enclosed material. The Village Safe Water Act will clearly define the purpose, objectives and limitations of our program. The case studies report from the Northern Engineer will give you a better idea of the sanitation systems we've constructed in the past.

We look forward to your active participation in this selection process and to being advised of your choice by March 11. Please feel free to contact me at 465-2687 in Juneau if you have any questions or comments.

Sincerely,



Greg Capito  
Senior Planner  
Village Safe Water

Enclosures

cc: Executive Directors of the  
Regional Health Corporations

bc: Comm/All Regional Supervisors  
and Division Directors, PHS

GC:tl

# MEMORANDUM

# State of Alaska

TO: Jerry Sargent  
Sanitary Engineer  
Village Safe Water

DATE: March 23, 1977

FILE NO:

TELEPHONE NO:

FROM: Gregory Capito *GREG*  
Senior Planner  
Village Safe Water

SUBJECT: V.S.W. Candidate Selection  
Process: Update

Two or three Village Safe Water facilities will be built this year in Native communities. In meetings and more recently in letters, we requested that each Native Health Corporation select a village most in need of a Village Safe Water project. An update of this selection process follows:

1. North Pacific Rim Health Department

Gregg Brelsford indicated no candidate in his area because all villages are covered by PHS.

2. North Slope Borough Health Department

Elise Patkotak says ~~Pt. Hope~~ is the choice, telcon 3-14.  
*Nuigsut TELCON 4-4-77;*

3. Kodiak Area Native Health Authority

Don Skaw - expect no letter from him as all 6 villages are covered by HUD/PHS.

4. Maneluk Association

Chuck Green says Kobuk is the candidate village.

5. Southeast Alaska Regional Health Corporation

Conrad Baines has yet to decide but Kasaan is likely candidate. S.E. area is heavily covered by HUD/PHS.

6. Norton Sound Health Corporation

Ray Van Ostran says the Village of Council is the probable choice according to telcon 3-14. He must check with Bill Dann to confirm this selection.

7. Tanana Chiefs Health Authority

Paul Sherry is acting Director. Five villages are under consideration but a candidate cannot be submitted until April 1 - because of staffing problems. He states that several communities like Circle would like to construct buildings which would serve as municipal centers as well as sanitation facilities. But additional matching funds are needed. He indicates that the Village Corporations could act as the construction contractor in this sort of an effort. I told him to put his idea on paper and explain it in greater detail.

*TANANA - PERSONNEL CONTRACT 4-1-77*

8. Aleut/Pribilof Health Department

Marie Sipary says that because of PHS coverage no villages in her area qualify.

9. Bristol Bay Area Health Corporation

Robert Clark has not responded to the request. Planning officer Nancy Knoohuizen indicates she will bring it to his attention as soon as possible. *Pilot Point TELCON 3-23-77*

10. Cook Inlet Native Health Department

The staff of this Health Corporation is leaving and Dan Slaby formerly of T.C.C. is taking over in April. We should expect no response until then. *NINILCHIK - TELCON 4-4-77.*

11. Yukon-Kuskokwim Health Corporation

Alvin Ivanoff nominates Eek, Newtok and Kipnuk, and Sheldon's Point. They couldn't decide on just one. The Yukon Kuskokwim Health Corporation Board thought our method of selecting candidates is a good one. But Leon Moses of Chevak wondered what would happen if O & M funds ran out? He warned Board members to be cautious. *NIGHTMUTE TELCON with Peter 4-6-77*

12. Copper River Health Department

Still no candidate village received from Billy Peters. Attempts to obtain a response continue. *MENAFETA - TELCON 4-4-77 with Billy*

The Association of Regional Health Directors has agreed to act in an advisory capacity for the VSM program. This group will help us prioritize the candidate villages. The selection process will be probably completed this spring when Dept. of Environmental Conservation engineers conduct field investigations and on-site inspections of the top two or three villages and discuss the projects with village leaders.

Enclosure

April 19, 1977

Mr. William Dann, Executive Director  
NORTON SOUND HEALTH CORP.  
P.O. Box 966  
Nome, Alaska 99762

Dear William:

RE: Rural Sanitation

The Village Safe Water (VSW) program will construct two or three new sanitation facilities this year in rural Alaskan communities. At an April 13 meeting in Kotzebue, the Association of Regional Health Directors, (ARHD), acting as the VSW advisory board, prioritized a list of eight rural villages. A summary of the group's recommendations follows:

<u>REGIONAL HEALTH CORP.</u>	<u>VILLAGE</u>	<u>ARHD PRIORITY</u>
Norton Sound Health Corp.	Council	1
Tanana Chiefs Health Authority	Tanana	2
Bristol Bay Health Authority	Pilot Point	3
North Slope Borough Health Dept.	Nuiqsut	4
Cook Inlet Native Association	Ninilchik	5
Copper River Health Dept.	Mentasta	6
Yukon-Kuskokwim Health Dept.	Nightmute	7
Maneluk Association	Kobuk	8

The prioritization process was done by examining background data, including information relating to the difficulty each village faces in obtaining a reliable source of clean water. This information was then placed in perspective by evaluating each community's prospects for sanitation improvements. For example, Council was placed at the top of the list because of the village's undeveloped source of supply and there were no improvements planned. In contrast, Kobuk, also with an undeveloped source, was placed at the bottom of the priority list because the Public Health Service has immediate plans to construct a sanitation system under provisions of the Indian Health Care Improvement Act, P.L. 94-437.

Tanana and Pilot Point were placed 2 and 3 on the priority list. The Village of Tanana uses groundwater with a high iron content. It was also pointed out that this village of nearly 500 people may not receive a PHS project until FY 80 or 81. Pilot Point has a difficult water supply problem with a tundra lake as the source. Prospects of a PHS project for Pilot Point appear dim until FY 79.

The advisory group carefully deliberated the existing health problem in the Village of Ninilchik. Here, the source of supply contains bacterial contamination during much of each year. The board placed Ninilchik number four on the priority list and petitioned appropriate federal and state agencies to investigate the health problem and take appropriate action to correct the immediate health hazard. To address the long term sanitation needs of Ninilchik, the board recommended that scheduled improvements for the village planned by PHS for FY 80, be accelerated to protect the health and welfare of residents and tourists.

Nuiqsut, Mentasta and Nightmute were recognized as villages with water supply problems. However, PHS project planning for these communities is scheduled to begin by FY 77 or 78.

The advisory board also considered prioritizing Kassan, a late entry submitted by the S.E. Alaska Regional Health Corporation. But since the board felt Kassan would not displace the top three villages, there was no need to consider them this year.

Now that the prioritization process is completed, the Dept. of Environmental Conservation, working through the appropriate Regional Health Corporations, will contact the top 2 or 3 villages. This will be done to determine what type of facilities the people in these communities would like, and the technical and economic feasibility of constructing, operating and maintaining these systems.

In order to keep the board advised on the candidate selection process, written reports will be mailed to each member of the ARHD. An update could also be presented at the next regularly scheduled Association meeting, if the organization so desires.

Thank you for your active participation in the candidate selection process. We welcome your increased involvement in the VSW program.

Sincerely yours,



Gregory Capito  
Senior Planner  
Village Safe Water

February 22, 1977

The Honorable Joe Orsini  
Alaska State Senate  
Pouch V  
Juneau, Alaska 99811

Dear Senator Orsini:

In your letter dated February 11, 1977 you inquired about how our Village Safe Water design and construction contracts are awarded and administered. Enclosed is a copy of a report entitled, "The State of Alaska Village Safe Water Program" in which the short history of the VSW program is summarized. As you can see in the report, we have tried four different methods of constructing VSW projects in search of satisfactory projects at reasonable costs.

The first two projects (at Northway and Chevak) were small remodeling efforts, with design done by engineering consultants under contract with this Department, and construction done by typical competitive bid construction contracts administered by this Department.

Several Alaskan consulting firms were interviewed by our staff. Criteria evaluated included (no priority): experience in remote Alaska construction; sanitary engineering qualifications; capability to administer construction contracts; interest in working on small jobs (Consultant fees were about \$7,000 to \$10,000); and the department's long experience in reviewing and evaluating sewerage plans prepared by consulting engineers. CH2M/Hill, Alaska and Ellerbe, Alaska were selected to design these two projects.

These projects went quite well, although we faced the inflexibility of lump sum construction contracts, and we couldn't very well control the impact of the construction contractors on the villages.

The next three projects (at Selawik, Alakanuk and Nulato) were designed and built by typical State construction methods through the Division of Buildings. These projects were most unsatisfactory and expensive as is described in the enclosed report.

Being dissatisfied with the first five VSW projects, we resolved to try new methods of constructing facilities in Pitkas Point, Koyukuk and Beaver. We chose a combination of three-party design and construction management contracts among the Department, the villages, and engineering consultants. For each project there was a design contract followed by a separate construction management contract, with the same consulting firm involved in both contracts. Construction was carried out by the villages, using the engineering consultants to manage construction activities and grant funds from this Department to pay the bills. This Department, with participation by the villages, directed the day to day activities of the consultants.

Consultants with a unique combination of talents were needed to carry out these last three projects. Especially important was competence and arctic experience in structural engineering, foundations, mechanical engineering, electrical engineering, sanitary engineering and construction management. We also wanted firms willing to work in an "extension of staff" role, since we wanted close control over development of the projects.

We were in a particularly advantageous position to evaluate consultants when these projects began because of 1) our dealings with consultants in the municipal construction grants program, and 2) our intimate involvement with about 15 consultants in reviewing water supply and waste disposal design they were doing for a massive rural school construction program.

As you can imagine, there were not any consulting firms in the State possessing fully all the attributes we were looking for. Sanitary engineering ability and construction management experience were the specialties most difficult to find, to say nothing of finding firms equally well qualified over the wide range of specialties needed. We finally selected three firms which, at that time, came closest to possessing the abilities we were looking for. They were CH2M/Hill, DOWL Engineers and R & M Consultants.

We wanted a different firm for each job to get a wide range of ideas on how to provide the services specified in the Village Safe Water Act. Unfortunately, CH2M ran into organizational problems a few months after they accepted the Koyukuk project, and the job had to be transferred to another firm. To minimize lost time and money in the transfer, we thought it best to have a firm with VSW experience complete the Koyukuk job. Since DOWL was nearing the end of the Pitkas Point VSW project, we asked them to finish the facility in Koyukuk.

The VSW projects in Pitkas Point, Koyukuk and Beaver have been much more satisfactory than the first five. They cost much less and were built much faster than they would have been if they were built by competitive bid construction contracts this Department and the villages had more control over how they were built, the villages were more involved in administering the projects, and village residents were the employees during construction.

There is, however, still room for improvement. There was some inefficiency due to the consultants' lack of experience with our construction methods. Also, the villages could be even more directly involved in managing their projects. For our latest project in Kongiganak, the village has contracted directly with their own consulting firm (C.E. West and Associates) for design and construction management (see enclosed copies of the design and construction management contracts).

February 22, 1977

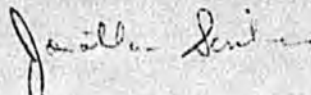
-3-

The village has designated this Department as their representative to direct the consultant's work since communication from the village is difficult and the village lacks technical expertise.

We recommended C.E. West and Associates to Kogniganak because 1) Mr. West himself had experience with innovative construction management techniques while he was Public Works Director for Anchorage, 2) Ed Pohl, with good arctic experience and credentials, would do the sanitary engineering, 3) Mark Fryer, with the experience of having worked on the Beaver project would do the mechanical engineering, and 4) Mr. West had the experience of working on the Pitkas Point project during the short time he was with DOWL Engineers.

Once again, thank you for your continuing interest in the Village Safe Water program.

Sincerely yours,



Jonathan W. Scribner  
Director  
Division of Water Programs

Enclosures

cc: Jerry Sargent  
Commissioner Muller/w/cc of Orsini ltr  
JWS:JWS:tl

January 18, 1977

Honorable Joseph L. Orsini  
Alaska State Senate  
Pouch Y  
Juneau, Alaska 99811

Dear Senator Orsini:

I thought it might be helpful to follow up the telephone conversation between Mr. Scribner of this Department and you concerning our proposed amendment to the Village Safe Water (VSW) Act.

The present law defines a "village" as an unincorporated community which has between 25 and 600 people residing within a two mile radius, or a second class city.

We feel this definition is antiquated and should be revised for the following reasons:

- Many small villages, for example, Selawik and Pelican, are now first class cities and would not qualify under the Act, although they otherwise might qualify for a VSW project.
- Second class cities larger than 600 population qualify under the present definition although VSW projects would not be appropriate solutions to sanitation problems in these communities.

To clarify what we understand to be the legislative intent of the VSW Act we have proposed to revise the definition of "village" to read:

"village" means an incorporated or unincorporated community which has between 25 and 600 people residing within a two mile radius."

This definition would include some 200 communities in Alaska. Of these 200 there are perhaps 70 to 100 communities where a centralized VSW project would be appropriate - the remaining communities have some form of water and sewer service to individual homes or realistically could be

January 18, 1977

served by such systems. So far a total of eight VSW facilities have been completed or nearly completed under the Act. Funding is available for two or three more projects. At the present rate of funding we feel the program must concentrate on providing projects to communities where there is the greatest need for sanitation services and where there is active community interest in a project.

We have had occasional interest from "villages" along the major highway systems in the State but have not rated them high in priority because they already have access to many of the services available under the VSW Act. Given the present policy of solving the worst problems first, and the current funding rate, these communities may not be granted projects for many years. The proposed modifications would not change the likelihood of projects for these communities.

Please let me know if you would like further clarification on the effect of the proposed change. We appreciate your interest in the VSW program.

Sincerely,

Ernst W. Mueller  
Commissioner

bx: Sargent

JMS/rs

July 20, 1977

DOWL Engineers  
4040 "B" Street  
Anchorage, Alaska 99503

Gentlemen:

The State of Alaska Village Safe Water program will soon be entering the initial design phase on two more central water and sewer facilities. The next two projects scheduled for design and construction are Council and Tanana.

Several consulting engineering firms have expressed strong interest in working on these projects in the past. My concern is the interest your consulting firm may have in working on either of the two new projects.

Work on this type of project demands a solid and diversified engineering background. Engineering skills which are mandatory for work on these projects include sanitary engineering, structural engineering, soils and foundation engineering, mechanical engineering and electrical engineering. In addition to the engineering expertise necessary for design of the project, it is also essential the consulting firm selected has an adequate knowledge of construction scheduling and management techniques pertinent to "bush" construction.

In the event you may not be very familiar with the VSW program, I shall briefly outline some of the major points of the program.

Initial contact with the community is made by ADEC. Through a series of meetings, the scope of the project is mutually agreed upon by the community and ADEC. At this point in time ADEC becomes the technical representative for the community and the consultant selection process is begun. When the consultant is selected, a representative of the consultant and a representative of ADEC travel to the community to begin collecting design data, and to establish liaison between the community and the consultant. The design phase of the project then progresses with periodic conceptual meetings among the concerned

July 20, 1977

parties. The design phase of the project ends when a set of final plans is produced and agreed to by ADEC and the community. A second end product of the design phase is a realistic cost estimate for the construction phase of the project.

Assuming the construction cost estimate is within budget limitations, a construction management contract is negotiated, and the construction phase of the project is begun. During the construction phase the consultant is responsible for all materials ordering and shipping, all project scheduling and logistics, and all actual construction activities. The facility itself is constructed to the maximum extent possible by people in the community working under the direct supervision of a construction technician hired and directed by the consultant. The consultant is further responsible for timely schedule estimates and periodic construction reports. During the final days of construction the consultant prepares a set of as-built plans and a comprehensive operations and maintenance manual, and instructs a locally hired operator in proper use of the same. Following a final inspection of the facility by all concerned parties, and the completion of a punch list, if any, the facility becomes the responsibility of the community and ADEC. The final task for the consultant is to prepare a complete construction analysis for ADEC and the community.

Should your firm be interested in working on one of these projects, I would appreciate it very much if you would send me your qualifications by August 12, 1977.

Should you wish further information on the program, or further clarification on the scope of work involved with these projects, please feel free to write me or call me at (907) 465-2636.

Sincerely,

Jordan Suhr  
Sanitary Engineer  
Village Safe Water

cc: Jerry Sargent  
Greg Capito

JS/rs

✓DOWL Engineers✓  
404 "B" Street  
Anchorage, AK 99503

✓Quadra Engineering✓  
117 East 53rd  
Anchorage, AK 99502

✓R & M Consultants✓  
5024 Cordova  
Anchorage, AK 99503

✓CH2M/Hill✓  
310 "K" Street  
Anchorage, AK 99503

H.V. Lounsbury & Associates  
723 West 6th Avenue  
Anchorage, AK 99501

✓Tryck, Nyman & Hayes✓  
740 "I" Street  
Anchorage, AK 99501

Dames & Moore Consulting Engineers  
711 "H" Street  
Anchorage, AK 99503

✓Bomhoff & Associates✓  
1020 W. International Airport Rd.  
Anchorage, AK 99502

✓Ellerbe Associates Inc.  
3201 "C" St.  
Anchorage, AK 99503

✓Ted Forsi & Associates✓  
107 West 6th Ave. Suite 205  
Anchorage, AK 99501

Unwin, Scheben & Korynta  
103 East 26th Avenue  
Anchorage, AK 99503

Entranco Engineers  
825 Irwin  
Anchorage, AK 99504

Murry-McCormick, Inc.  
1101 Orca  
Anchorage, AK 99501

International Technology LTD  
723 West 6th Avenue  
Anchorage, AK 99501

✓SKM Incorporated✓  
600 West 53rd Avenue  
Anchorage, AK 99502

Robert Rutherford Associates  
6927 Old Seward Highway  
Anchorage, AK 99502

Stephen Brown  
Consulting Engineer  
4546 Business Park Boulevard  
Anchorage, AK 99503

✓Michael Baker, Jr.✓  
1512 Cushman  
Fairbanks, AK 99701

✓Toner & Nordling✓  
Registered Engineers  
114 South Franklin St.  
P.O. Box 570  
Juneau, AK 99802

✓Charles Poole & Associates✓  
1225 Tongass  
Ketchikan, AK 99901

Kramer, Chin & Mayo  
510 Goldstein Bldg.  
150 Seward Street  
Juneau, AK 99801

✓Philleo Engineering✓  
& Architectural Services  
529 Sixth Avenue  
Fairbanks, AK 99701

✓Galliett & Associates✓  
Engineers & Surveyors  
746 "F" Street  
Anchorage, Alaska 99501

✓George Davidson✓  
Engineering Manpower Assoc.  
1711 Glacier Avenue  
Juneau, AK 99801

✓Arctic Environmental Engineers  
3217 Arctic Blvd.  
Anchorage, AK 99503

✓Wince, Corthell & Assoc.✓  
Consulting Engineers  
P.O. Box 3-394  
Anchorage AK 99501



②

~~who~~ <sup>that</sup> left Dames & Moore to work for himself. They have asked Mr. Jones to contact me in Anch., Sept. 8.

Mr. Rogers expressed his worry that Fairbanks firms would not receive as much consideration for our jobs as Anchorage firms. I told him that if a Fairbanks firm appeared outstandingly suited we would try to consider them equally with Anchorage firms. He is aware of the logistics problems, however.

Their lead Mechanical Engr. seemed quite good at applying innovative thinking to bush facilities while maintaining simple operation. He also had some ideas on cost savings. In contrast to other engineers of his type, he worked his way up to a P.E. without a degree and seems to have a more practical view of things.

They are very interested in the jobs and I think they may be good for Council - especially if we decide to try some different power generation & sizing (wind).

③ Michael Baker, Jr. - Mr. William McMullen, the Alaska manager of the firm, and I spent 2 hours discussing our projects and their firm. Although most of their work has been pipeline soils and surveying work, they are quite interested in a project of ours.

Their firm has 1300 engineers & technicians around the world. So items that could not be handled in Fairbanks would be sent outside within the firm. Those items would be mech./elec. & sanitary.

The only experience they have which applies is that much of their in house bookkeeping for Alaska was very similar to our construction bookkeeping. I guess they are also very good in soils exploration.

(3)

④ Philleo Engineering & Architectural - I spent 1 hour with Mr. E. Philleo, Mr. H. Isberg, and Doug - ? . Doug is a young engineer working on his MSCE - Sanitary - at the University. He has had quite a little bush experience and worked with Dan Smith in Edmonton.

The firm is quite small and, consequently, has no electrical, mechanical, or soils expertise. They mentioned using Jim Lake for electrical and Crews Mc & Hoffman for mechanical. After hearing that last firm name I sort of wrote off Philleo.

④

The following are consultants both Jordan & I talked with. Therefore I will just discuss my main impressions of them.

Arctic Environmental Engineers - They sure talk a convincing story of bush experience, innovative design, and keeping the facilities manageable. Apparently their clients have been well satisfied. Their all around experience fits our jobs very well and most all of Tanana and Council could be done in house with the exception of soils work.

Wince-Corthell - What a pair. First impression tells me that here is one guy that is ideal for us and one that should sell used cars. But I've been wrong on more ~~th~~ first impressions than I will admit. Several years ago I heard some good gossip about Allan Corthell and people apparently still think that way. The firm is quite small but they have a lot of bush experience - both design and working with villagers.

Tryck Nyman Hayes - I wish I had paid more attention to gossip about this firm. Seems like everyone has something political to say about them at one time or another. They do have similar experience and some very good personnel that we met.

DCWL - They've had a few of our jobs and I'm all for trying someone new. However, there is something to say for sticking with a good thing. I would like to see rough <sup>design</sup> proposals from 3 firms, including DCWL, before making the Tanana selection.

⑤

Bomhoff & Asso. - I can foresee the R & M problem here of being 3<sup>rd</sup> or 4<sup>th</sup> on their importance scale once the project is started. I would feel allright about using them but I think we have better, untried choices.

Ted Forsi & Asso. - This firm was hard for me to gage. They are certainly young and energetic but lack the expertise for an involved project like Tanana. Much of that job would be farmed out. However, they do have bush experience and might be ideal for Council.

R & M - One man does not a firm make! And I'm not sure the one man is an ideal match for Tanana or Council. The previous lack of importance given our job, lack of communication, lack of clean construction, and lack of P R in the village convinces me we don't want to try them again.

## The Big Selections.

Using a rating of <sup>(recommended)</sup> 3 = excellent <sup>(consider later)</sup> 2 = good  
1 = fair (keep in mind) I will list only those firms I consider qualified for our jobs. In each case see my above discussion of the firm.

### Tanana

3 - DOWL - I know exactly what they are capable of. See my dollar idea on page ④.

3 - One of the firms Jordan saw without me might be good. ?

2½ - Tryck Nyman Hayes - Maybe they would be excellent. Or maybe we could end up low on their list of importance.

1 - Arctic Environmental - I don't think this is the job to try them out on. I've heard pro & con on the firm and I don't want to get surprised on a job this size.

### Council

3 - Ellerbe - Council wouldn't take as much plan review, etc. and I would like to try their engineers.

3 - Wince-Corthell - I think they would try hard to work with us and the village.

2 - Ted Forsi - Their youth might mean ~~might~~ very conscientious work.

1 - Philleo - This firm might be too used to typical State work for our jobs.

Selawik / Nulato

- 3 - Arctic Environmental - I think they have just the right combination of sanitary engineering and innovative gut engineering for these modifications. I know we want to try this firm and I think this is the place instead of Tanana.
- 2 - R & M - I'm not all that impressed with Dan Smith's ability to modify an existing plant. I think he would rather add on than use what's there. And I sure am not impressed with the rest of the firm. With direction, however, Dan could very well surprise me.
- 2 - Quadra - I talked with Ed once about these modifications and he had a few interesting ideas.

Chevak

- 3 Quadra - I think John would give us the best attack at this difficult problem.
- 1 R & M - Their only advantage is that they have a lot of pipeline planting experience.

① ~~File - Tanana Const Correspondence~~ (0/9/77)  
② File - Tanana Const Correspondence  
Council " "

September 23, 1977

Engineering Manpower Services  
1711 Glacier Avenue  
Juneau, Alaska 99801  
Attn: George Davidson

Dear Mr. Davidson:

In July of this year I wrote a letter concerning the construction of Village Safe Water projects in the communities of Tanana and Council. Your consulting firm expressed interest in working on one or both of these projects.

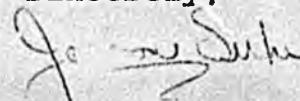
Since early August this Department has been reviewing the credentials of all consulting firms that expressed interest in the program. Someone directly associated with the Village Safe Water program has had personal contact with all interested firms. In many cases I personally visited with members of the firm.

I was very surprised, and pleased, to receive nearly twenty responses to my letter, although the number of responses mandated a more thorough and exhaustive selection process than I had originally envisioned. Finally this past week we made the actual consultant selections, and unfortunately I must inform you that your firm was not selected to work at either Tanana or Council. This is certainly no reflection on the qualifications or capabilities of your personnel. Selecting the consultants to work on these projects was a very difficult task indeed. Nearly all firms interviewed had outstanding qualifications, as well as a wide range of experience on similar projects. I could only wish that we had more projects.

I sincerely hope that you will continue your interest in the Village Safe Water program. I am hopeful that we will have more construction projects in the future, and that at such time you will again be interested in working with us.

Thank you for your cooperation in our consultant selections.

Sincerely,



Jordan Suhr  
Sanitary Engineer  
Village Safe Water

September 23, 1977

Galliett & Associates  
746 "F" Street  
Anchorage, Alaska 99501  
Attn: Harold Galliett

Dear Mr. Galliett:

In July of this year I wrote a letter concerning the construction of Village Safe Water projects in the communities of Tanana and Council. Your consulting firm expressed interest in working on one or both of these projects.

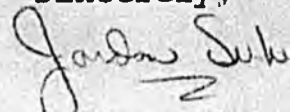
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Thank you for your cooperation in our consultant selections.

Sincerely,



Jordan Suhr  
Sanitary Engineer  
Village Safe Water

September 23, 1977

Philleo Engineering &  
Architectural Services  
529 Sixth Avenue  
Fairbanks, Alaska 99701  
Attn: Howard Isberg

Dear Mr. Isberg:

In July of this year I wrote a letter concerning the construction of Village Safe Water projects in the communities of Tanana and Council. Your consulting firm expressed interest in working on one or both of these projects.

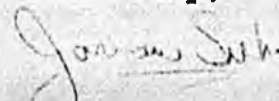
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Thank you for your cooperation in our consultant selections.

Sincerely,



Jordan Suhr  
Sanitary Engineer  
Village Safe Water

September 23, 1977

Charles Pool & Associates  
1225 Tongass  
Ketchikan, Alaska 99901  
Attn: Jim Lutz

Dear Mr. Lutz:

In July of this year I wrote a letter concerning the construction of Village Safe Water projects in the communities of Tanana and Council. Your consulting firm expressed interest in working on one or both of these projects.

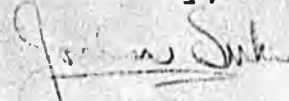
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I sincerely hope that you will continue your interest in the Village Safe Water program. I am hopeful that we will have more construction projects in the future, and that at such time you will again be interested in working with us.

Thank you for your cooperation in our consultant selections.

Sincerely,



Jordan Suhr  
Sanitary Engineer  
Village Safe Water

September 23, 1977

Toner & Nordling  
114 South Franklin Street  
P.O. Box 570  
Juneau, Alaska 99802  
Attn: Felix Toner

Dear Mr. Toner:

In July of this year I wrote a letter concerning the construction of Village Safe Water projects in the communities of Tanana and Council. Your consulting firm expressed interest in working on one or both of these projects.

Since early August this Department has been reviewing the credentials of all consulting firms that expressed interest in the program. Someone directly associated with the Village Safe Water program has had personal contact with all interested firms. In many cases I personally visited with members of the firm.

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Thank you for your cooperation in our consultant selections.

Sincerely,



Jordan Suhr  
Sanitary Engineer  
Village Safe Water

September 23, 1977

Michael Baker, Jr.  
1512 Cushman  
Fairbanks, Alaska 99701  
Attn: William McMullen

Dear Mr. McMullen:

In July of this year I wrote a letter concerning the construction of Village Safe Water projects in the communities of Tanana and Council. Your consulting firm expressed interest in working on one or both of these projects.

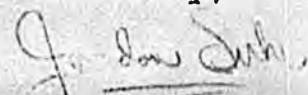
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Thank you for your cooperation in our consultant selections.

Sincerely,



Jordan Suhr  
Sanitary Engineer  
Village Safe Water

September 23, 1977

Ted Forsi & Associates  
107 West 6th Avenue, Suite 205  
Anchorage, Alaska 99501  
Attn: Ted Forsi

Dear Mr. Forsi:

In July of this year I wrote a letter concerning the construction of Village Safe Water projects in the communities of Tanana and Council. Your consulting firm expressed interest in working on one or both of these projects.

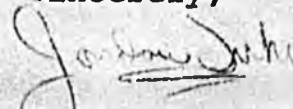
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Thank you for your cooperation in our consultant selections.

Sincerely,



Jordan Suhr  
Sanitary Engineer  
Village Safe Water

September 23, 1977

Bomhoff & Associates  
1020 West International Airport Road  
Anchorage, Alaska 99502  
Attn: James Voeller

Dear Mr. Voeller:

In July of this year I wrote a letter concerning the construction of Village Safe Water projects in the communities of Tanana and Council. Your consulting firm expressed interest in working on one or both of these projects.

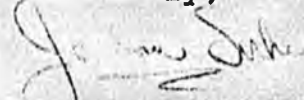
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Thank you for your cooperation in our consultant selections.

Sincerely,



Jordan Suhr  
Sanitary Engineer  
Village Safe Water

September 23, 1977

Tryck, Nyman & Hayes  
740 "I" Street  
Anchorage, Alaska 99501  
Attn: Frank Nyman

Dear Mr. Nyman:

In July of this year I wrote a letter concerning the construction of Village Safe Water projects in the communities of Tanana and Council. Your consulting firm expressed interest in working on one or both of these projects.

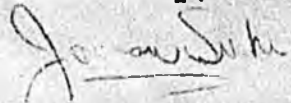
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Thank you for your cooperation in our consultant selections.

Sincerely,



Jordan Suhr  
Sanitary Engineer  
Village Safe Water

September 23, 1977

CH2M/Hill  
310 "K" Street  
Anchorage, Alaska 99503  
Attn: Alan Hill

Dear Mr. Hill:

In July of this year I wrote a letter concerning the construction of Village Safe Water projects in the communities of Tanana and Council. Your consulting firm expressed interest in working on one or both of these projects.

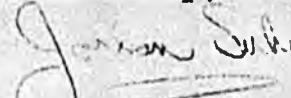
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Thank you for your cooperation in our consultant selections.

Sincerely,



Jordan Suhr  
Sanitary Engineer  
Village Safe Water

September 23, 1977

DOWL Engineers  
4040 "B" Street  
Anchorage, Alaska 99503  
Attn: Ken Walch

Dear Mr. Walch:

In July of this year I wrote a letter concerning the construction of Village Safe Water projects in the communities of Tanana and Council. Your consulting firm expressed interest in working on one or both of these projects.

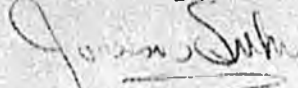
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Thank you for your cooperation in our consultant selections.

Sincerely,

  
Jordan Suhr  
Sanitary Engineer  
Village Safe Water

September 23, 1977

Quadra Engineering  
117 East 53rd Avenue  
Anchorage, Alaska 99502  
Attn: Calvin West

Dear Mr. West:

In July of this year I wrote a letter concerning the construction of Village Safe Water projects in the communities of Tanana and Council. Your consulting firm expressed interest in working on one or both of these projects.

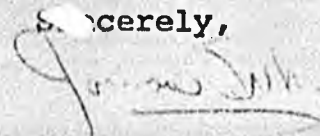
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Thank you for your cooperation in our consultant selections.

Sincerely,



Jordan Suhr  
Sanitary Engineer  
Village Safe Water

September 23, 1977

R & M Engineering  
5024 Cordova  
Anchorage, Alaska 99503  
Attn: James Rooney

Dear Mr. Rooney:

In July of this year I wrote a letter concerning the construction of Village Safe Water projects in the communities of Tanana and Council. Your consulting firm expressed interest in working on one or both of these projects.

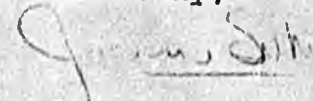
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Thank you for your cooperation in our consultant selections.

Sincerely,



Jordan Suhr  
Sanitary Engineer  
Village Safe Water

September 23, 1977

Wakon Redbird & Associates  
600 West 53rd Avenue  
Anchorage, Alaska 99502  
Attn: Wakon Redbird

Dear Mr. Redbird:

In July of this year I wrote a letter concerning the construction of Village Safe Water projects in the communities of Tanana and Council. Your consulting firm expressed interest in working on one or both of these projects.


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Thank you for your cooperation in our consultant selections.

Sincerely,

  
Jordan Suhr  
Sanitary Engineer  
Village Safe Water

September 23, 1977

Wince-Corthell & Associates  
P.O. Box 3-394  
Anchorage, Alaska 99501  
Attn: Frank Wince

Dear Mr. Wince:

In July of this year I wrote a letter concerning the construction of Village Safe Water projects in the communities of Tanana and Council. Your consulting firm expressed interest in working on one or both of these projects.

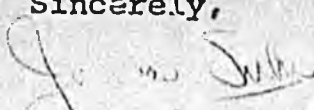
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Thank you for your cooperation in our consultant selections.

Sincerely,

  
Jordan Suhr  
Sanitary Engineer  
Village Safe Water

ARTICLES OF INCORPORATION  
OF  
COUNCIL SAFEWATER CORPORATION

We, the undersigned natural persons of the age of nineteen years or more, acting as incorporators of a corporation under the Alaska Nonprofit Corporation Act, adopt the following Articles of Incorporation for such Corporation:

ARTICLE I

The name of the Corporation shall be: Council Safe Water Corporation.

ARTICLE II

The period of duration: Perpetual (see Article IV, number 1).

ARTICLE III

The purpose for which this Corporation is organized are to engage in construction, ownership, and management of a sanitation facility to be built in Council as authorized by the State of Alaska Village Safe Water Act (AS 46.07).

ARTICLE IV

Provisions, not inconsistent with law, which the incorporators elect to set out in the Article of Incorporation for the regulation of the internal affairs of the Corporation, including provision for distribution of assets on dissolution or final liquidation:

1. The Council Safe Water Corporation is organized to construct, own, and manage a Village Safe Water (VSW) facility in Council as called for in Paragraph C, Section 46.07.050, at such time as the Village might incorporate, the newly incorporated City will assume the powers and duties of this Corporation; whereupon this Corporation will commence action for voluntary dissolution.

ARTICLE VII

The names and addresses of the incorporator(s) of the Corporation are as follows:

Max Gray  
John Fisher  
Don Wilson  
\_\_\_\_\_  
\_\_\_\_\_

Council, Alaska  
Council Alaska  
Council AK 99750  
\_\_\_\_\_  
\_\_\_\_\_

IN WITNESS WHEREOF, we have executed these Article of Incorporation this 17 day of September, 1977.

Max Gray  
Incorporator

John Fisher  
Incorporator

Don Wilson  
Incorporator

\_\_\_\_\_  
Incorporator

\_\_\_\_\_  
Incorporator

Natary  
Doris Messer Nome, Alaska  
expires Oct 15, 1977

# STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION

JAY S. HAMMOND, GOVERNOR

POUCH 0 - JUHEAU 99111

October 4, 1977

Mr. Jake Titus  
Board Chairman  
Council Safewater Corporation  
Council, Alaska

Dear Mr. Titus:

Governor Jay Hammond has asked me to convey his pleasure in advising you that Council has qualified to receive a grant, through the Village Safe Water (VSW) Program, for design of a central sanitation facility. As we understand your desires, the facility is to include a safe and dependable year round water supply and a central waste disposal area.

When the design is complete, we anticipate offering you a second grant, as funds become available, for actual construction costs for the facility.

Acceptance of this design grant is subject to the following grant conditions.

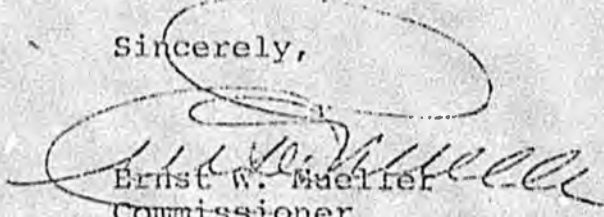
- 1) Council Safewater Corporation (hereafter called the Corporation) will retain a consulting engineering firm licensed to do business in Alaska, to design the Council VSW facility. In previous discussions, we understand the Corporation is selecting Ellerbe Alaska as the consulting design firm.
- 2) The Corporation will enter into a design contract with the consulting engineering firm selected in item (1) above, specifying the engineering planning and review requirements of the consultant. ADEC will assist the Corporation in preparing the contract, and it must be approved by the ADEC before being signed by the Corporation. Under the design grant, VSW funds will be used by the Corporation to pay expenses specified in the contract. Funds will be accounted for and disbursed in accordance with provisions of the design contract. Additional reasonable accounting requirements may be established during the life of the project.

- 3) If a VSW construction grant is offered to the Corporation, the Corporation will retain a consulting engineering firm licensed to do business in Alaska to manage construction of the VSW facility. ADEC will assist the Corporation in selecting the consulting construction management firm. The Corporation will enter into a construction management contract with the consulting engineering firm so selected specifying the construction management requirements of the consultant. ADEC will assist the Corporation in preparing the construction management contract, and that contract must be approved by ADEC before it is signed by the Corporation. Under the construction grant VSW funds will be used by the Corporation to pay construction expenses approved by ADEC as specified in the construction management contract.
- 4) The Corporation will establish and maintain a separate bank account into which all VSW design grant funds will be deposited, and out of which all VSW design expenses will be paid. If a VSW construction grant is offered to the Corporation, all construction grant funds will be deposited in the same account and used only for actual construction expenses. No other funds will be deposited in the VSW account without prior approval by ADEC.
- 5) Upon completion of the Village Safe Water facility to the satisfaction of the Corporation and according to the technical requirements of ADEC the Corporation agrees to make every reasonable effort to provide for its continued operation and maintenance.

If you wish to accept this Village Safe Water design grant offer subject to the above grant conditions, please so indicate by appropriate signatures at the end of this letter. If you have questions about the grant or wish to suggest any changes please inform me immediately.

I am very pleased at the prospect of the construction of improved health and sanitation facilities for the citizens of Council.

Sincerely,

  
Ernst W. Mueller  
Commissioner



CONTRACT TO PROVIDE ENGINEERING SERVICES FOR  
A VILLAGE SAFE WATER FACILITY IN COUNCIL, ALASKA

This contract between the Council Safewater Corporation (hereafter called the Corporation), and Ellerbe Alaska (hereafter called the Contractor);

WITNESSETH that:

This contract is entered into by direct negotiation and is a contract for professional services; and

The Contractor is willing to undertake performance of this contract under the terms of the contract.

NOW THEREFORE, the parties hereto agree as follows:

Article 1. The Service to be Performed

The Contractor will provide all necessary engineering services for a project generally described as a Village Safe Water (VSW) sanitation facility construction project in Council, Alaska.

Specific services the Contractor agrees to furnish are as follows:

1. Do all necessary engineering planning, field investigation, and design for a VSW facility in Council, Alaska, including collecting adequate site data, investigating land ownership and providing for required access, and designing economical facilities to adequately provide a water supply and waste disposal in Council.
2. Meet with the Corporation and the Corporation's designated representative as reasonably required by the Corporation's designated representative to establish the scope of the VSW project and review progress of the project.
3. Prepare engineering plans and a materials list for the Council VSW facility. The plans and materials list are to be sufficient to guide construction of the facility and ordering of necessary materials; and to be subject to the review and approval of the Corporation and the Corporation's designated representative.

the activities and functions required of the Contractor to supply the services described in items (1), (2) and (3) of this Article 1 are the following:

- A. Project Definition--meetings between the Corporation's designated representative and the Contractor as reasonably required by the Corporation's designated representative to supply the Contractor with information and instructions pertinent to the project.
- B. Data Collection and Review--collection and review by the Contractor of all pertinent published and unpublished data available on Council and community facilities. This activity will be performed prior to the meetings described in item (A) above.
- C. Project Reconnaissance--trips to Council by members of the Contractor's staff as reasonably required by the Corporation's designated representative to gain familiarity with the village, its people and local resources.
- D. Soils and Surveying--the Contractor will send men and equipment to Council to gather all soils and topographic data necessary for designing the MSW facility. The Contractor will also provide for all materials testing and data analysis required for design of the Council MSW facility.

E. Conceptual Design--the Contractor, the Corporation and the Corporation's designated representative will come to written agreement on a Conceptual Design which will indicate the general methods for providing the services to be included in the Council VSW facility. The Conceptual Design will be represented in flow diagram and narrative form.

F. Preliminary Design--when the Contractor, the Corporation and the Corporation's designated representative have agreed to a Conceptual Design, the Contractor will prepare a detailed design of a complete VSW facility to achieve the functions described in the Conceptual Design. Included with the Preliminary Design will be an estimate of construction costs for the facilities designed, and an estimate of annual operations and maintenance costs for the facilities designed. The design data and cost estimates will be presented in a standard engineering drawing and narrative form which will allow the Corporation and the Corporation's designated representative to review all design details: typically required in a finished engineering design will be represented in this Preliminary Design, although not necessarily in final draft form.

G. Final Design--when the Corporation and the Corporation's designated representative have reviewed the Preliminary Design and cost estimates, and made recommendations for alterations (if any), the Contractor will amend the Preliminary Design to accommodate those alterations. If any alterations to the Preliminary Design which constitute a change in the Conceptual Design are required by the Corporation and the Corporation's designated representative, such alterations will be considered outside the scope of work of this contract and eligible for added compensation at the rates shown in Appendix A. The Final Design and cost estimates will be presented in complete engineering drawings and include any narrative required for clarity. A complete materials list will be prepared as part of the Final Design.

II. Review of Project Progress with the Corporation's Designated Representative--the Contractor accepts responsibility for keeping the Corporation's designated representative apprised of progress on the activities required by this contract. Among the review sessions will be meetings between the Corporation's designated representative and the Contractor:

- 1) following Project Reconnaissance and Soils and Surveying data collection and analysis (items C and D above)
- 2) to review the Conceptual Design (item E above)
- 3) to review the Preliminary Design (item F above)
- 4) to review the Final Design (item G above).

#### Article II. Evaluation of Performance

The Corporation's designated representative will monitor all work done by the Contractor on the Council VSW project. No payment will be made to the Contractor under this contract until the Corporation and the Corporation's designated representative agree the Contractor's performance is consistent with the terms of this contract.

#### Article III. Performance Period

The period of performance under this contract shall begin on the date of signing by the Contractor. All performance required of the Contractor under this contract will be completed by June 30, 1978. The Contractor may be paid for his work on the Council VSW project performed prior to the beginning date of this contract, if such payment is approved by the Corporation's designated representative.

- 1) following Project Reconnaissance and Soils and Surveying data collection and analysis (items C and D above)
- 2) to review the Conceptual Design (item E above)
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- 4) to review the Final Design (item G above).

#### Article II Evaluation of Performance

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#### Article III. Performance Period

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Article IV. Consideration.

A. General Compensation.

For all costs up to a total of \$20,000.00 associated with fulfilling the terms of this contract and not specifically covered elsewhere in this contract, the Contractor will be reimbursed by the Corporation as follows:

1. Engineering and Office Personnel--engineering and office personnel shall be compensated at the appropriate rates from the fee schedule in Appendix A which is attached to and is made a part of this contract.
2. Other Expenses--for direct expenses not covered by item (1) above, compensation shall be at the appropriate rates shown in Appendix A.

B. Special Compensation.

1. Field Activities--when the Contractor's personnel and equipment are in, or enroute to, Council, or otherwise involved in field activities called for by this contract, reimbursement to the Contractor for his personnel and equipment shall be at the appropriate

rates shown in Appendix A. This reimbursement shall not be part of the \$20,000.00 limit set in paragraph A of this Article IV. All travel, transportation, and other arrangements for performance of field activities called for by this contract must have the approval of the Corporation's designated representative prior to the actual travel, transport and/or other field activities.

2. Transportation, Meals and Lodging--for all travel, transportation, and other field activity related costs authorized by the Corporation's designated representative for fulfilling this contract and not covered by item B-1 above, the Contractor will be reimbursed by the Corporation at actual invoice cost. This reimbursement shall not be a part of the \$20,000.00 limit set in paragraph A of this Article IV.

Article V. Payment

The Contractor will be compensated by the Corporation in the amounts specified in Article IV of this contract. The Contractor will keep detailed cost records to be submitted with, and serve as justification for, monthly payment requests. The monthly payment requests will be made to the Corporation's designated representative. After reviewing a monthly payment request, the Corporation's designated representative will notify the Contractor in writing of the amount of the payment request approved for payment. The contractor will then prepare a check to himself, using check blanks provided by the Corporation for drawing on the Corporation's bank account, in the amount approved by the Corporation's designated representative. The Contractor will then send the prepared check to the Corporation for signature, after which the Corporation will return the signed check to the Contractor. Any payment made to the Contractor under this contract not approved in writing by the Corporation's designated representative constitutes a breach of this contract, and any such payments must be refunded by the Contractor to the Corporation.

Article VI. Successors and Assigns

This contract shall be binding upon the heirs, successors, executors, administrators and assigns of the respective parties hereto.

Article VIII. Additional Contract Provisions

In signing this contract, the Contractor agrees in good faith to being desirous of, and willing and able to, undertake total management of construction of the VSW facility dealt with in this contract, provided acceptable terms for doing so can be arrived at between the Contractor and the Corporation.

Appendix B attached hereto and made a part hereof sets forth additional general provisions of this contract.

Appendix C attached hereto and made a part hereof is a general outline of the scope of work called for by this contract. It is included only as a guide for the Contractor and is not an all-inclusive specification of contract requirements. Article 1 of this contract is the governing specification of the services required of the Contractor.

IN WITNESS WHEREOF, the parties have executed this contract:

Contractor


Council Safewater Corporation

Roger Santoluciano  
Signature

Richard J. Turner  
Board Chairman

Date Jan. 19, 1978

Date Nov. 1, 1977



THE FOLLOWING DOCUMENT(S) MAY NOT FILM  
LEGIBLY BECAUSE OF POOR QUALITY OF THE  
ORIGINAL.

## PROFESSIONAL FEES

HOURLY RATES

## ARCHITECTURAL AND ENGINEERING SERVICES

SEPTEMBER 1977

<u>Personnel Category</u>	<u>Hourly Rate</u>
Principal	\$ 55.00
Professional Employee	\$ 50.00
Technical Employee III	\$ 41.50
Technical Employee II	\$ 31.00
Technical Employee I	\$ 24.00
Clerical II	\$ 22.00
Clerical I	\$ 19.00
Consultation, Brief	\$ 75.00
Court Appearances and Testimony	\$ 75.00 hour (minimum \$300.00)

Consultants, Sub-contract Services and Materials

Except where other arrangements have been established, all authorized services of consultants, sub-contract services, and reimbursable materials and expenses will be billed at actual cost plus ten percent.

Travel and Per Diem Reimbursement

Except where other arrangements have been established, all expenses of authorized travel will be billed at actual cost. If per diem schedules are included in the professional services contract they will be used in place of the actual cost basis. When use of private aircraft is authorized, billing will be on the basis of reimbursement at cost. Cost basis for the aircraft typically used is established as follows:

FA-23	\$ 50.00 per hour
PA-12	\$ 75.00 per hour

APPENDIX B

Article B-1. Inspection and Reports

- A. The Corporation's designated representative shall have the right to inspect, in such manner and at all reasonable times as it deems appropriate, all activities of the Contractor arising in the course of its undertakings under this contract.
- B. The Contractor shall report his progress in such manner and at such times as the Corporation's designated representative may reasonably require.

Article B-2. Corporation Saved Harmless

The Contractor shall hold and save the Corporation, its officers, agents and employees harmless from liability of any nature or kind, including costs and expenses of or on account of any or all suits or damages of any character whatsoever resulting from injuries or damages sustained by any person or persons or property by virtue of any wrongful act or omission of the Contractor not specifically directed by the Corporation, its the Corporation's duly authorized agents, or the Corporations designated representative.

APPENDIX B

Article B-1. Inspection and Reports

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- B. The Contractor shall report his progress in such manner and at such times as the Corporation's designated representative may reasonably require.

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Article B-3. Equal Employment Opportunity.

- A. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, ancestry, age or sex. The Contractor will take affirmative action to insure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, national origin, ancestry, age, or sex. Such action shall include but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruiting advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
- B. The Contractor agrees that he will fully cooperate with the office or agency of the State of Alaska which seeks to deal with the problem of unlawful or invidious discrimination, and with all other State efforts to guarantee fair employment practices under this contract, and said Contractor will comply promptly with all requests and directions from the State Commission for Human Rights or any of its officers or agents relating to prevention of discriminatory employment practice.

C. Full cooperation as expressed in clause (B) foregoing shall include, but not be limited to, being a witness in any proceeding involving questions of unlawful or invidious discrimination if such is deemed necessary by any official or agency of the State of Alaska, permitting employees of said Contractor to be witnesses or complainants in any proceeding involving questions of unlawful or invidious discrimination, if such is deemed necessary by any official or agency of the State of Alaska, participating in meetings, submitting periodic reports on the equal employment aspects of present and future employment, assisting in inspection of the construction site, and promptly complying with all State directives deemed essential by any office or agency of the State of Alaska to insure compliance with all Federal and State laws, regulations, and policies pertaining to the prevention of discriminatory employment practices.

Article B-4. Disputes.

A. Except as otherwise provided in this contract, any dispute concerning a question of fact arising under this contract which is not disposed of by agreement shall be decided by the Commissioner of the Alaska Department of Environmental Conservation (hereafter called the Commissioner) who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Contractor. The decision of the Commissioner or his duly authorized representative

shall be final and conclusive unless, within 30 days from the date of receipt of such copy, the Contractor mails or otherwise furnishes to the Commissioner a written appeal. The decision of the Commissioner or his duly authorized representative for the determination of such appeal shall be final and conclusive. This provision shall not be pleaded in any suit involving a question of fact arising under this contract as limiting judicial review of any such decision to cases where fraud by such official or his representative or board is alleged: Provided, however, that any such decision shall be final and conclusive unless the same is fraudulent or capricious or arbitrary or so grossly erroneous as necessarily to imply bad faith or is not supported by substantial evidence. In connection with any appeal proceeding under this clause, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of his appeal. Pending final decision of a dispute hereunder, the Contractor shall proceed diligently with the performance of the contract and in accordance with the Commissioner's decision.

- B. This Disputes clause does not preclude consideration of questions of law in connection with decisions provided for in paragraph (A) above. Nothing in this contract, however, shall be construed as making final the decision of any administrative official, representative or board on a question of law.

Article B-5. Termination.

The Corporation's designated representative may, by written notice, terminate this contract in whole or in part, when it is in the best interest of the Corporation. The Corporation shall be liable only for payment in accordance with the payment provisions of this contract for services rendered prior to the effective date of termination.

Article B-6. No Assignment.

The Contractor shall not assign this contract, nor any part thereof, nor any right to any of the monies to be paid him hereunder, nor shall any part of the work done or material furnished under said contract be sublet, except with the written consent of the Corporation's designated representative.

Article B-7. No Additional Work.

No claim for additional services, not specifically herein provided, done or furnished by the Contractor, will be allowed, nor shall the Contractor do any work or furnish any material not covered by the contract unless such work is ordered in writing by the Corporation's designated representative.

Article B-8. Independent Contractor.

The Contractor, and any agents and employees of the Contractor, shall act in an independent capacity and not as officers of employees or agents of the Corporation in the performance of this contract.

Article B-9. Availability of Appropriation.

This agreement is subject to the availability of Village Safe Water grant funds under AS 46.07.

Article B-10. Requirement for Alaska Business License.

It is understood and agreed that if an Alaska Business License is required under Alaska Statutes 43.70 the Contractor is now in possession of the same or, in the event he does not now have a license, he will apply for same to the Commissioner of Revenue, Pouch SA, Juneau, Alaska 99801 within 30 days following the effective date of this contract.

Article B-11. Conformity with Federal Regulations.

Notwithstanding any other provisions of this contract, it is expressly understood that during any wage/price freeze imposed by Executive Order or Federal legislation the rates paid will be determined in accordance with federal guidelines.

No retroactive payment will be made at the termination of the wage/price freeze unless such payment is consistent with federal guidelines.

Article B-12. Payment of Taxes.

As a condition of performance of this contract, the Contractor shall pay all Federal, State, and local taxes incurred by the Contractor, sub-contractor or other person or persons in the performance of this contract, and the Corporation may require proof of payment of these taxes as a condition precedent to payment by the Corporation under this contract.

Article B-13. Ownership of Documents.

All plans, drawings and specifications, originals and tracings, shall become the property of the Corporation, whether the facilities for which they are made be commenced or not. All field notes shall be kept in new hard cover field books and will be retained by the City at the completion of the project.

Article B-14. Corporation's Designated Representative.

For the purposes of this contract, the Corporation's Designated Representative is the Alaska Department of Environmental Conservation.

## APPENDIX C

### I. Project Start

A. Time with the Corporation's designated representative to obtain what the Corporation's designated representative has on:

- 1) Demography
- 2) Goals and Objectives
- 3) Design Criteria
- 4) Influent Parameters
- 5) Water Supply Alternatives and Source
- 6) Waste Water Alternatives
- 7) Building Site
- 8) Building Uses

B. Data Collection and Review

### II. Reconnaissance--1st trip to village

- A. Get acquainted with people
- B. Review with local people the preliminary information developed in (1) above
- C. Get overview of local resources (generally the physical facilities, power availability, accommodations, etc.)
- D. Probably soil investigation and well site (or other water source) selection

III. Review by Corporation's designated representative

- A. Review information developed in (I) above in light of experience in (II) above.
- B. Take account of any engineering and soils information arising from (II) above.

IV. Field Survey--2nd trip to village

- A. Detailed topographic data for design
- B. Additional soils information if needed
- C. Explain final scope of project to local people

V. Review by Corporation's designated representative

Short meeting or discussion to consider any new factors which have arisen during (IV) above.

VI. Conceptual Design

General description of services and methods for the VSW facility, with written agreement among the Corporation, the Corporation's designated representative, and the Contractor.

A. Water Supply

- 1) Source development
- 2) Transmission system
- 3) Treatment

B. Waste Disposal

- 1) Treatment System
- 2) Waste handling system and effluent disposal

C. Building Layout

- 1) Foundation and Structural
- 2) Equipment Inside
- 3) Electrical and Mechanical

D. Preliminary Drafting

E. Cost Estimates

VIII. Review by Corporation's Designated Representative

Detailed and in-depth review and coordination to set final details of design.

IX. Final Design

- A. Adjust preliminary design in view of (VIII) above
- B. Final Drafting
- C. Descriptive information as necessary
- D. Materials List
- E. Revised Cost Estimates

# STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION

JAY S. HAMMOND, GOVERNOR

POUCH 0 - JUNEAU 99811

April 6, 1978

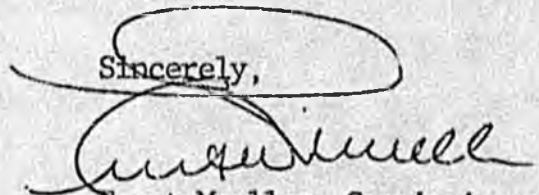
Mr Jake Titus  
Board Chairman - Council  
Safewater Corporation  
Council, Alaska

Dear Mr. Titus:

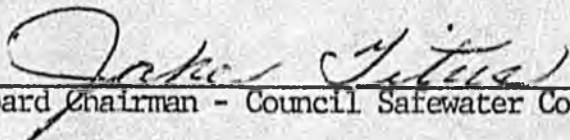
Governor Jay Hammond has asked me to convey his pleasure in advising you that Council has qualified to receive a construction grant, through the Village Safe Water (VSW) program, to construct a VSW facility. The grant will be in the amount of actual construction costs for the VSW facility.

In a design grant agreement signed by the Council Safewater Corporation on October 25, 1977 (see copy enclosed), conditions were established for managing the construction grant herein offered. If you wish to accept this Village Safe Water grant, subject to the grant conditions previously agreed to, please indicate by appropriate signatures at the end of this letter. If you have questions about the grant or wish to suggest any changes, please inform me.

Sincerely,



Ernst Mueller, Commissioner  
Department of Environmental  
Conservation

  
Board Chairman - Council Safewater Corporation

5-20-78  
Date

  
Board Member

5-18-78  
Date

  
Board Member

5-20-78  
Date

CONTRACT TO PROVIDE FOR CONSTRUCTION MANAGEMENT  
FOR A VILLAGE SAFE WATER FACILITY  
IN COUNCIL, ALASKA

This contract between Council Safe Water Corporation (hereafter called the Corporation), and Ellerbe Alaska (hereafter called the Contractor);

WITNESSETH that:

This contract is entered into by direct negotiation and is a contract for professional services; and

The Contractor and the Corporation are willing to undertake performance of this contract under the terms of the contract:

NOW THEREFORE, the parties hereto agree as follows:

Article I. The Service to be Performed.

The Contractor will provide all necessary engineering and construction management services for a project generally described as a Village Safe Water (VSW) sanitation facility construction project in Council, Alaska.

Specific services the Contractor agrees to furnish are as follows:

1. Manage all activities necessary for the construction of a VSW facility in Council, Alaska. Said VSW facility will be constructed according to the approved design resulting from the contract entitled Contract to Provide Engineering Services for a Village Safe Water Facility in Council, Alaska signed by the Contractor on January 19, 1978; and

according to any modifications in design requested by the Corporation or the Corporation's designated representative.

2. Maintain detailed, itemized and accurate records of all financial transactions required in the course of constructing the Council VSW facility. These financial records are to be sufficient to satisfy audit requirements for expenditure of State of Alaska grant funds.
3. Manage start-up and training activities as directed by the Corporation's designated representative.

Among the activities and functions required of the Contractor to supply the services described in the above items (1), (2) and (3) of this Article I are the following:

- A. Equipment and Materials - the Contractor is responsible for the timely ordering, scheduling and expediting of all equipment (including construction tools and equipment) and materials necessary for construction of the Council VSW facility. All equipment and materials used in the project shall be approved by the Corporation's designated representative prior to ordering. The Corporation's designated representative shall in a timely manner indicate its approval or disapproval of equipment and materials proposed by the Contractor to be used in the VSW project. The Corporation's designated representative may waive the prior approval requirement for incidental equipment and materials reasonably required in

construction of the VSW project when time required for such approval would unreasonably delay progress on the construction project.

- B. Management Foreman - the Contractor shall provide a Management Foreman to be on the construction site in Council at all times when construction on the Council VSW project is progressing. The Management Foreman will be an employee of the Contractor and must be approved by the Corporation's designated representative and the Corporation.

The Management Foreman is responsible for managing all construction activities at the VSW project site, including managing laborers and all other construction personnel. All personnel other than the Management Foreman working on the VSW construction project will be employed by the Corporation.

The Contractor or his designated representative will inform the Corporation of needs for personnel to work on the construction project and the Corporation will provide these personnel through local (Council) hire to the extent local people are available. If personnel needs cannot be met locally, the Corporation may obtain assistance from the Contractor in obtaining personnel from outside Council. The Management Foreman shall have authority to dismiss and discipline personnel provided by the Corporation to work on the VSW project. The Management Foreman will properly report such dismissals and disciplinary actions to the Corporation.

C. Financial Management

- (1) Equipment and Materials - the Contractor shall requisition in the Corporation's name, all equipment and materials required for the Council VSW project. The Corporation's designated representative must approve all equipment and materials before they are requisitioned under this contract.

The Contractor will make out all necessary checks, using blanks provided by the Corporation, for payment of bills for equipment and materials approved by the Corporation's designated representative. The Contractor will send these checks to the Corporation for signature after the Contractor has given the Corporation's designated representative the check number, payee and amount for each check. After signing the checks, the Corporation will return them to the Contractor for appropriate distribution. The Contractor shall submit to the Corporation's designated representative a copy of each check written along with appropriate backup data (e.g., invoice, bill of lading).

- (2) Time and Payroll - for all personnel employed by the Corporation and working on the VSW project, the Contractor will keep complete and detailed records of time worked on the VSW construction project. The Contractor

will submit upon request of the Corporation's designated representative a complete and up to date statement of personnel payroll information for all personnel employed by the Corporation and working on the construction project. The personnel payroll statement will include the time worked by each person, the work classification of each person, and total pay for each person.

Every two weeks the Contractor will submit to the Corporation for signing and distribution: 1) payroll checks for all personnel working on the VSW project during the previous two weeks, and 2) all required payroll deduction checks. Said checks will be prepared by the Contractor using blanks provided by the Corporation. Before submitting the payroll checks to the Corporation for signing, the Contractor will give the Corporation's designated representative the check number, payee and amount for each check. Any checks to be mailed outside of Council will be returned to the Contractor for distribution.

All legally required payroll deduction report forms and payments will be prepared and distributed as necessary by the Contractor.

If the Corporation's designated representative finds any payroll statement incorrect or inconsistent with the terms of this contract,

it will be returned to the Contractor for correction. The Contractor will be responsible for correcting the personnel payroll statement and making consequent corrections in deduction payments and personnel payroll statements.

D. Monthly Work Schedule - By the twentieth day of each month during which this contract is in force, the Contractor will submit to the Corporation's designated representative a Monthly Work Schedule for the following month. The Corporation's designated representative may waive this Monthly Work Schedule requirement for any given month if activities under this contract are so limited for that month as to make a Monthly Work Schedule unnecessary. The Monthly Work Schedule will be in two separate sections entitled: 1) Construction Schedule, and 2) Project Management Schedule.

(1) Construction Schedule - the Construction Schedule will be a description of all activities at the Council project site planned for a given month, including a general description of work to be accomplished.

(2) Project Management Schedule - the Project Management Schedule will be a description of all the Contractor's activities on the VSW project planned for a given month, including work to be done by the Contractor's personnel, work to be done by engineering and office

personnel, and anticipated transportation and travel.

- (3) Total Project Estimate - the first Monthly Work Schedule after design of the Council VSW project is completed will contain a projection by the Contractor of a total schedule for accomplishing the Council construction project, including a general description of, and time sequence for, activities at the construction site; an estimate of total equipment and materials expenses; an estimate of supplies and materials necessary for operation of the project for a period of one year following completion; a general description of, and time sequence for, activities by the Contractor; and an estimate of the total Construction Management fee. In each succeeding Monthly Work Schedule, the Total Project Estimate will be evaluated by the Contractor and adjusted as necessary to keep it current and accurate.

If the Corporation's designated representative approves the Total Project Estimate, the dollar amount of the total project estimate for the total Construction Management fee becomes a limit on the amount that can be paid for the Construction Management fee under this contract. The Contractor may request from the Corporation's designated

representative increases in the limit on the Construction Management fee if such increases are justified and reasonably essential to the completion of the project.

Each Monthly Work Schedule must be approved by the Corporation's designated representative prior to the work described in each Monthly Work Schedule being accomplished.

- E. Start-up and Training - the Contractor will manage and direct start-up training activities as directed by the Corporation's designated representative during the first thirty (30) days after the VSW project is operational and accepted in writing as complete by the Corporation and the Corporation's designated representative.

Prior to completion of the VSW construction project, the Contractor will prepare five (5) bound sets of maintenance manuals and operating instructions for submittal to the Corporation's designated representative for approval. The Manuals will consist of: 1) complete descriptive data for all equipment and controls utilized in the VSW project, giving all capacities, characteristics, curves and diagrams; 2) a complete list of repair and replacement parts essential to maintenance of the VSW project; and 3) a complete descriptive narrative of all operating procedures for all systems in the project (including general methods

for servicing all equipment).

During the (30) day start-up and training period, and using the maintenance manuals described above as a text, the Contractor will, as directed by the Corporation's designated representative, train personnel provided by the Corporation to operate and maintain the VSW project. The Contractor will, to the extent requested by the Corporation's designated representative, demonstrate to the operators being trained, and explain to them in detail, all activities required for operation of the VSW project. All operation and maintenance activities performed by the Contractor will be explained to the operators as they are being performed.

F. Additional Requirements - The Contractor will prepare and submit to the Corporation's designated representative for approval a complete set of detailed and accurate as built plans for the VSW project. These plans will be complete and submitted to the Corporation's designated representative within thirty (30) days after the VSW project is complete and accepted in writing by the Corporation and the Corporation's designated representative.

The Contractor will prepare and submit to the Corporation's designated representative a narrative report with a report detailing construction experiences, both typical and unique to the VSW

project. The report will also include a summary of expenditures on the VSW project. The report will be prepared using a format approved by the Corporation's designated representative.

The Contractor will prepare and submit to the Corporation's designated representative a summary of labor hours worked on the VSW project. This summary will be sufficient to satisfy requirements for a final workman's compensation audit.

#### Article II. Evaluation of Performance

The Corporation's designated representative will monitor all work done by the Contractor on the Council project which is the subject of this contract. A representative of the Corporation's designated representative shall be acquainted with the scope of the project and shall have the authority to render decisions promptly and furnish information expediently. No payment will be made to the Contractor under this contract unless the Contractor's performance is consistent with the terms of this contract. If the Corporation's designated representative becomes aware of any fault or defect in the project, or nonconformance with contract specifications, the Corporation's designated representative shall give prompt notice thereof to the Contractor.

#### Article III. Performance Period.

The period of performance under this contract shall commence on the date by which all parties to it have

signed. All performance required of the Contractor under this contract will be completed by December 31, 1978 unless such completion is prevented or hindered by failure of the Corporation to supply personnel as called for in this contract, act of God, strike, partial or total interruption or loss or shortage of transportation facilities, fire, lockout, commandeering of raw materials, products, plants or facilities or by other similar or different acts of civil or military authorities or by other like causes beyond the control of the Contractor. The Contractor may be paid for work on the project covered by this contract which was performed prior to the date of signing by all parties, if such payment is approved by the Corporation's designated representative.

#### Article IV. Consideration.

All compensation to the Contractor for performance under this contract will be paid under the Construction Management fee. For all costs up to \$36,000. associated with fulfilling the terms of this contract, the Contractor will be reimbursed by the Corporation as follows:

1. Management Foreman - The Contractor will be reimbursed by the Corporation for payroll expenses for the Management Foreman. The Contractor's choice of a Management Foreman must be approved by the Corporation's designated representative prior to the Management Foreman performing work called for by this contract. The Management Foreman's pay rate shall be \$31.00 per hour.

Travel by the Management Foreman authorized by the Corporation's designated representative and necessary for fulfilling this contract will be reimbursed by the Corporation at actual invoice cost. For meals and lodging while in work status approved by the Corporation's designated representative, the Management Foreman will be paid \$60.00 per 24 hour day.

2. Engineering and Office Personnel - for work approved by the Corporation's designated representative under this contract, the Contractor's personnel shall be compensated at the appropriate rates from the fee schedule in Appendix A, which is attached to and made a part of this contract.
3. Transportation, Travel, Meals and Lodging - for travel by the Contractor's personnel, and transportation authorized by the Corporation's designated representative and not covered elsewhere in this contract, the Contractor will be reimbursed by the Corporation in accordance with the rates in Appendix A. For meals and lodging expenses for the Contractor's personnel while in authorized travel status, the Contractor will be reimbursed in accordance with the rates in Appendix A. All travel under this contract must have the prior approval of the Corporation's designated representative.
4. Other Expenses - for direct expenses approved by the Corporation's designated representative and

not covered elsewhere in this contract, the Contractor will be reimbursed by the Corporation in accordance with the rates in Appendix A.

#### Article V. Payment.

The Contractor will be compensated by the Corporation according to procedures specified in Article IV of this contract.

The Contractor will submit to the Corporation's designated representative a request for monthly payment of the Construction Management fee for the appropriate month. Each such monthly payment request will include complete detailed records to substantiate the request. After reviewing a monthly payment request, the Corporation's designated representative will notify the Contractor in writing of the amount of the payment request approved for payment. The Contractor will then send the prepared check to the Corporation for signature, after which the Corporation will return the signed check to the Contractor. Any payment made to the Contractor under this contract not approved in writing by the Corporation's designated representative constitutes a breach of this contract, and any such payments must be refunded by the Contractor to the Corporation.

A retainer in the amount of \$2,000 will be withheld until the Contractor has completed all requirements of this contract. The retainer will be withheld from the last \$10,000 to be paid to the Contractor under this contract.

Article VI. Successors and Assigns.

This contract shall be binding upon the heirs, successors, executors, administrators and assigns of the respective parties hereto.

Article VII. Additional Contract Provisions.

Appendix B which is attached to and made a part of this contract sets forth additional provisions of this contract.

IN WITNESS WHEREOF, the parties have executed this contract:

Contractor

Council Safe Water Corporation

Signature

*Roger Santelman*

Board Chairman

*John Stross*

Date

*June 13, 1978*

Date

*May 30, 1978*

APPENDIX "A"

ELLERBE ALASKA FAIRBANKS DIVISION

PROFESSIONAL FEES

HOURLY RATES

ARCHITECTURAL AND ENGINEERING SERVICES

SEPTEMBER 1977

<u>Personnel Category</u>	<u>Hourly Rate</u>
Principal	\$ 55.00
Professional Employee	\$ 50.00
Technical Employee III	\$ 41.50
Technical Employee II	\$ 31.00
Technical Employee I	\$ 24.00
Clerical II	\$ 22.00
Clerical I	\$ 19.00
Consultation, Brief	\$ 75.00
Court Appearances and Testimony	\$ 75.00 hour (minimum \$300.00)

Consultants, Sub-Contract Services and Materials

Except where other arrangements have been established, all authorized services of consultants, sub-contract services, and reimbursable materials and expenses will be billed at actual cost plus ten percent.

Travel and Per Diem Reimbursement

Except where other arrangements have been established, all expenses of authorized travel will be billed at actual cost. Meal and lodging expenses will be billed in accordance with Article 27 (Travel and Per Diem) of the agreement between the State of Alaska and the Alaska Public Employees Association, 1977-1979. When use of private aircraft is authorized, billing will be on the basis of reimbursement at cost. Cost basis for the aircraft typically used is established as follows:

PA-23	\$ 60.00 per hour
PA-12	\$ 25.00 per hour

Article B-1. Inspection and Reports

- A. The Corporation's designated representative shall have the right to inspect, in such manner and at all reasonable times as it deems appropriate, all activities of the Contractor arising in the course of its undertakings under this contract.
- B. The Contractor shall report his progress in such manner and at such times as the Corporation's designated representative may reasonably require.

Article B-2. Corporation Saved Harmless

The Contractor shall hold and save the Corporation, its officers, agents and employees harmless from liability of any nature or kind including costs and expenses for or on account of any or all suits or damages of any character whatsoever resulting from injuries or damages sustained by any person or persons or property by virtue of any wrongful act or omission of the Contractor not specifically directed by the Corporation, its duly authorized agents, or its designated representatives.

Article B-3. Equal Employment Opportunity.

- A. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, ancestry, age, or sex. The Contractor will take affirmative action to insure that applicants are employed and that employees are treated during employment

without regard to their race, color, religion, national origin, ancestry, age, or sex. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruiting advertising; layoff or termination, rates of pay or other forms of compensation; and selection for training, including apprenticeship.

- B. The Contractor agrees that he will fully cooperate with the office or agency of the State of Alaska which seeks to deal with the problem of unlawful or invidious discrimination, and with all other State efforts to guarantee fair employment practices under this contract, and said Contractor will comply with all requests and directions from the State Commission for Human Rights or any of its officers or agents relating to prevention of discriminatory employment practice.
- C. Full cooperation as expressed in clause (B) foregoing shall include, but not be limited to, being a witness in any proceeding involving questions of unlawful or invidious discrimination if such is deemed necessary by any official or agency of the State of Alaska, permitting employees of said Contractor to be witnesses or complainants in any proceeding involving questions of unlawful or invidious discrimination, if such is deemed necessary by any official or agency of the State of Alaska, participating in meetings, submitting periodic

reports on the equal employment aspects of present and future employment, assisting in inspection of the construction site, and promptly complying with all State directives deemed essential by any office or agency of the State of Alaska to insure compliance with all Federal and State laws, regulations, and policies pertaining to the prevention of discriminatory employment practices.

Article B-4. Disputes.

- A. Except as otherwise provided in this contract, any dispute concerning a question of fact arising under this contract which is not disposed of by agreement shall be decided by the Commissioner of the Alaska Department of Environmental Conservation (hereafter called the Commissioner), who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Contractor. The decision of the Commissioner or his duly authorized representative shall be final and conclusive unless, within 30 days from the date of receipt of such copy, the Contractor mails or otherwise furnishes to the Commissioner a written appeal. The decision of the Commissioner or his duly authorized representative for the determination of such appeals shall be final and conclusive. This provision shall not be pleaded in any suit involving a question of fact arising under this contract as holding judicial review of any such decision to cases where found by such official or his representative

or board is alleged: Provided, however, that any such decision shall be final and conclusive unless the same is fraudulent or capricious or arbitrary or so grossly erroneous as necessarily to imply bad faith or is not supported by substantial evidence. In connection with any appeal proceeding under this clause, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of his appeal. Pending final decision of a dispute hereunder, the Contractor shall proceed diligently with the performance of the contract and in accordance with the Commissioner's decision.

B. This disputes clause does not preclude consideration of questions of law in connection with decisions provided for in paragraph (A) above. Nothing in this contract, however, shall be construed as making final the decision of any administrative official, representative or board on a question of law.

#### Article B-5. Termination.

The Corporation's designated representative may, by written notice, terminate this contract, in whole or in part, when it is in the best interest of the Corporation. The Corporation shall be liable only for payment in accordance with the payment provisions of this contract for services rendered prior to the effective date of termination.

#### Article B-6. No Assignment.

The Contractor shall not assign this contract, nor any part thereof, nor any right to any of the monies to be paid him hereunder, nor shall any part of the work done or material furnished under said contract be sublet, except with the written consent of the Corporation's designated representative.

**Article B-7. No Additional Work.**

No claim for additional services, not specifically herein provided, done or furnished by the Contractor, will be allowed, nor shall the Contractor do any work or furnish any material not covered by the contract, unless such work is ordered in writing by the Corporation's designated representative.

**Article B-8. Independent Contractor.**

The Contractor, and any agents and employees of the Contractor, shall act in an independent capacity and not as officers, employees, or agents of the City in the performance of this contract.

**Article B-9. Availability of Appropriation.**

This agreement is subject to the availability of Village Safe Water grant funds under AS 16.07.

**Article B-10. Requirement for Alaska Business License.**

It is understood and agreed that if an Alaska Business License is required under Alaska Statutes 45.70 the Contractor shall obtain a license of some type in the event he does not now have a license he will apply for same

to the Commissioner of Revenue, Pouch SA, Juneau,  
Alaska 99801 within 30 days following the effective  
date of this contract.

Article B-11. Conformity with Federal Regulations.

Notwithstanding any other provisions of this contract,  
it is expressly understood that during any wage/price  
freeze imposed by Executive Order or Federal legislation  
the rates paid will be determined in accordance with  
federal guidelines.

No retroactive payment will be made at the termination  
of the wage/price freeze unless payment is consistent  
with federal guidelines.

Article B-12. Payment of Taxes.

As a condition of performance of this contract, the  
Contractor shall pay all Federal, State, and local  
taxes incurred by the Contractor, sub-contractor or  
other person or persons in the performance of this  
contract, and the Corporation may require proof of  
payment of these taxes as a condition precedent to  
payment by the Corporation under this contract.

Article B-13. Ownership of Documents.

All plans, drawings, specifications, originals and  
revisions, shall become the property of the Corporation,  
whether the facilities for which they are made be  
owned by the Corporation or not. All tools, equipment,  
and other field tools and will be retained by the

Corporation at the completion of the project.

Article B-14. Corporation's Designated Representative.

For the purposes of this contract, the Corporation's Designated Representative is the Alaska Department of Environmental Conservation.

THE PRECEDING DOCUMENT(S) MAY NOT FILM  
LEGIBLY BECAUSE OF POOR QUALITY OF THE  
ORIGINAL.

CONTRACT TO PROVIDE FOR CONSTRUCTION MANAGEMENT  
FOR A VILLAGE SAFE WATER FACILITY  
IN COUNCIL, ALASKA

AMENDMENT NO. 1


Article IV. Consideration. shall be changed in the first paragraph to read as follows:

All compensation to the Contractor for performance under this contract will be paid under the Construction Management fee. For all costs up to \$42,000 associated with fulfilling the terms of this contract, the Contractor will be reimbursed by the Corporation as follows:

This amendment increases the maximum allowable fee by \$6,000.00

Contractor

COUNCIL SAFE WATER CORPORATION

  
Signature

  
  
Jake Titus, Board Chairman

November 3, 1978  
Date

  
Date

ISSUE PAPERS

Water and Sewer Construction Grants

The Department of Environmental Conservation administers a grant program which provides incorporated communities with assistance in the construction of water and sewerage services. Two basic grant programs are administered: the State general obligation bond water and sewer grant program and the federal water pollution control program.

Under the State water and sewer grant program, incorporated municipalities may apply for grants to fund up to 50 percent of project costs for new water and sewerage facilities or one-half the non-Federal share of eligible costs if federal funding is involved. Funded projects include facilities needed for community growth as well as facilities needed to correct existing public health and environmental problems.

Eligible projects presently are funded as need arises. The source of funding for these grants is general obligation bond funds which have been authorized by the voters. Presently, approximately \$18 million is available for obligation to projects through this program.

These grants have supported projects in major communities in all regions of the state. The program is not heavily used by bush communities because the Public Health Service and the State Village Safe Water programs are addressing utility needs of remote areas and it is usually difficult for small remote communities to raise the 50 percent matching requirements. In some instances, however, projects in remote areas are funded through the program in conjunction with other federal, state, or local funding sources.

The grant program for construction of sewage treatment facilities is administered under the authorization of the federal Clean Water Act of 1977. Depending upon congressional appropriations from year to year, Alaska is allocated \$16-25 million annually. These funds are then available to communities to finance 75 percent of the cost of sewage treatment and interceptor projects. The State water and sewer grant program mentioned above contributes an additional 12 1/2 percent toward such projects leaving only 12 1/2 percent to be funded locally.

The Environmental Protection Agency is responsible for this grant program. However, EPA may delegate the administration of the program to the states, and make funding available to those states which assume administration of the program. In order to reduce the delays in grant processing which occurred under EPA administration, Alaska assumed responsibility for a major portion of the program in December of 1978 (one of the first states to do so).

Since 1975, approximately \$20 million of Federal funds a year has been awarded to 30 communities throughout the State. As with the State water and sewer grant program, the larger communities have benefitted the most from the program. Recent changes to the Clean Water Act present opportunities for making funding available to smaller communities for innovative, individual, or non-conventional sewage handling facilities.

## Village Safe Water

The Village Safe Water Act calls for at least one facility for safe water and hygienic sewage disposal in each village in Alaska.

Since 1972, eleven VSW facilities have been constructed. They are in the villages of Northway, Chevak, Alakanuk, Selawik, Nulato, Koyukuk, Beaver, Pitkas Point, Kongiganank, Tanana and Council. A facility is being designed for Akiachak and will be constructed during the summer and fall of 1980.

In these eleven villages the VSW projects consist of sanitation facilities to which village residents can come to obtain water supply and sewage disposal services; with bathing and laundry services available in all except Council. No piped water-distribution or sewage collection systems are involved except for water and sewer service lines to schools.

Construction methods used so far have included: 1) competitive bid construction contracts administered by what was then the Alaska Department of Public Works, 2) competitive bid construction contracts administered by the Alaska Department of Environmental Conservation (ADEC), and 3) force account construction by the village through construction management contracts with engineering consultants.

The force account/construction management method of construction has been the most satisfactory of the three methods used. Facilities constructed that way have been built cheaper and faster than those built under competitive bid construction contracts; the quality of construction has been better; and the villages have been more intimately involved in, and satisfied with, their projects.

VSW facilities have cost from \$118,000 at Council for a project begun in FY 78, to over \$1,400,000 at Tanana, of which \$755,000 were VSW funds. Villages served have ranged in size from 60 (Council) to over 550 (Selawik).

Experience in the VSW project has proved that financial, technical, and/or management assistance to the villages is necessary to ensure that the facilities continue to operate. ADEC provides technical and management assistance to the eleven villages. The VSW operation and maintenance support program has made it possible for all completed VSW facilities to serve the public as intended. It is instructive to note that the operation and maintenance cost per village has been decreasing in actual dollars (i.e., ignoring inflation) over the last few years.

ADEC has been working on a comprehensive planning effort intended to define the roles of State and federal agencies and other groups involved in providing rural sanitation services. The Department has sought close cooperation with the U.S. Public Health Service and the regional Native health corporations in carrying out the planning. In fact the Directors of the health corporations have served as an advisory board for the VSW program.

An early step in the planning was to inventory all village sanitation facilities. The inventory is updated annually and is widely viewed as the single most complete and dependable source of information on village sanitation.

Current plans are to investigate certain questions concerning how the VSW program should operate over the long term. Among the questions to be investigated are: 1) What services should VSW facilities provide (e.g., solid waste, piped service to individual homes, saunas)?; 2) Should there be village eligibility criteria for VSW program assistance?; 3) How should construction priorities be set?; 4) How fast should VSW facilities be built (i.e., how much construction money over what period of time)?; 5) What funding sources other than water and sewer bonds can be coordinated into VSW projects? and 6) What should the State's role be in operation and maintenance of VSW facilities, and perhaps other village sanitation facilities as well?

Authority: 46.07

CRITERIA SYSTEM  
for  
Allocation of Federal Water Pollution Control Grant Funds

The Federal Water Pollution Control Act Amendments of 1972 (PL 92-500) as amended by the Clean Water Act of 1977 (PL 95-217) provide grant funds to assist municipalities with facility plans (Step 1), engineering designs (Step 2) and project construction (Step 3) for water pollution control facilities. These funds are allocated to the State of Alaska for obligation through the Department of Environmental Conservation. The Department develops an annual Priority List for determining which projects will receive grants.

The project Priority List is developed using a criteria system to assign a numerical ranking to eligible projects in accordance with EPA requirements. These requirements stipulate that the type of project, severity of pollution, project step and continuity, receiving water usage, existing population affected, public health and environmental hazards, and the effect on water quality standards be considered in developing the Priority List.

The point values for the criteria system have been revised in accordance with PL 95-217 and have been used to prepare the Priority List for allocation of available federal funds. Each project appearing on the Priority List has been assigned appropriate points in each of nine categories. The points for each category are summed and the total used to determine the project rank on the Priority List. The project with the highest point total will be the highest priority project.

In developing the criteria system, the State can not consider "readiness to proceed" as a category for ranking projects. However, "readiness to proceed" can be a reason for moving a project into the fundable portion of the priority list if a higher ranking project will be unable to proceed on schedule, before the end of the fundable year.

When it appears that a project on the fundable portion of the priority list will not be ready to proceed within the fundable year, the State, with EPA concurrence, will notify the applicant that their project is being by-passed in favor of the highest ranking project on the extended portion of the Priority List that is ready to proceed. The applicant being by-passed may appeal this decision to the Department by requesting an adjudicatory hearing conducted under the Administrative Procedure Act. Projects that are by-passed will retain their relative priority rating for consideration on future Priority Lists.

The estimated completion schedules for projects on the fundable portion of the Priority List, by-passed for not being ready to proceed, will be compared with the schedules for compliance contained in the NPDES permit. In those cases where significant delays have occurred, appropriate State and/or EPA enforcement action will be recommended to achieve compliance with permit conditions.

Any projects on the extended portion of the priority list that are by-passed due to not being ready to proceed will be notified and given the opportunity to appeal. After agreement is reached with the applicants proposed for by-pass, the State will certify to EPA that those projects not ready to proceed may be by-passed to reach a project that will be ready during the fundable period.

In addition to funds obligated to specific projects, reserve accounts from each fiscal year's federal allocation will be set aside for the following purposes:

- 1) Up to two percent of each year's allocation or \$400,000, whichever is greater, may be reserved and granted to the State to manage the grants program and other specified portions of the Water Pollution Control Program.
- 2) Two percent of the federal allocation for FFY 79 and 80 and three percent for FFY 81 shall be reserved for projects incorporating alternative and innovative technology, and may be used to increase a federal grant up to a maximum of 85 percent. A minimum of 0.5 percent of the federal allocation for FFY 79, 80 & 81 shall be for projects using innovative technology.
- 3) Four percent of each year's allocation shall be reserved for alternatives to conventional treatment for communities with populations of 3,500 or less, or sparsely populated areas of larger communities.
- 4) A reserve of not less than five percent of each year's allocation will be maintained for funding grant increases.
- 5) A reserve may also be established to fund Step 1 & 2 projects that may or may not appear on the Priority List. To be funded, these projects must have a priority ranking high enough to appear on the fundable portion of the Priority List.
- 6) A state designation reserve may also be established for funding of project increases that occur prior to grant award.

The amounts set aside in these reserve accounts will vary from year to year depending on the federal allocation to Alaska and on the need for the particular reserve within the limitations described above. The specific amounts to be set aside in these reserves will be designated in the annual Priority List, which is subject to public review and comment.

This criteria system and the Priority List developed using these criteria are subject to annual review and comment at public hearings held for this purpose. These hearings are announced through individual mailings and public notice in newspapers of general circulation a minimum of 45 days prior to the first scheduled hearing. Public input regarding the preparation of the Priority List is welcomed.

Project priority rankings are determined according to the following nine categories. Appropriate points are assigned to arrive at a point total and priority ranking for each project:

I. Project Component

In determining the relative priority of the various project components the Department emphasizes the importance of maximizing the benefits to be achieved from limited federal funds. Project components required to achieve compliance with State water quality standards and protect public health will receive higher consideration than project components required by federal law which may provide treatment beyond what is required to protect health or the environment.

Hence, secondary or advanced treatment projects, when required only to satisfy an NPDES permit or other portions of federal law, may be phased on the Priority List so that the initial phase would meet water quality and health considerations, and the final phase would be constructed at a later date, subject to availability of funds. Projects for collection sewers, storm sewers and correction of combined sewer overflows are not considered eligible project categories for use of funds allocated to Alaska.

Projects are assigned a point total by multiplying the point value of the project component by the percentage of cost that a specific component bears to the total eligible project cost and then summing the point values computed for the components.

	<u>Component</u>	<u>Points</u>
a)	Initial phase(s) of treatment into marine water required to protect public health or achieve water quality standards; secondary treatment for discharge into fresh water; or any treatment required prior to discharge to groundwater.	300
b)	Rehabilitation or expansion of treatment facilities or correction of infiltration/inflow in sewage collection systems where existing conditions are disrupting the efficiency of existing treatment facilities.	250
c)	Rehabilitation and correction of infiltration/inflow of sewage collection systems where the required corrections are done in conjunction with a new treatment facility.	200

- |    |   |     |
|----|---|-----|
| d) | Construction of new interceptor sewers, pump stations and appurtenances.  | 150 |
| e) | Upgrading existing treatment facilities to secondary or advanced wastewater treatment levels when required for reasons other than meeting water quality standards or protection of public health. | 100 |

II. Project Water Quality Need

To date the Department has not completed an approved water quality management plan. However, information that will be the basis for this plan was taken into consideration in allocating points to projects in this category.

Points awarded for one section only.

- |    |   |     |
|----|---|-----|
| a) | Project necessary to treat or eliminate a discharge contributing to a documented violation of the Alaska Water Quality Standards.   | 400 |
| b) | Project necessary to minimize or eliminate documented "non-point source" contamination of groundwater or surface waters resulting from subsurface sewage disposal systems.            | 300 |
| c) | Project necessary to prevent potential water pollution problems or where the environment may be adversely affected due to the impact of accelerated development or industrial growth. | 200 |
| d) | Project only necessary to comply with the effluent limitations contained in an NPDES permit for a point source discharge.   | 100 |

III. Regulatory Emphasis for Violation of Water Quality Standards

- |    |   | <u>Points</u> |
|----|---|---------------|
| a) | Notice of Violation issued by Department of Environmental Conservation or EPA | 50            |
| b) | Compliance order issued by Department of Environmental Conservation or EPA    | 80            |
| c) | Charges filed by State Attorney General or legal counsel for EPA              | 100           |

IV. Public Health Emphasis

Points

Verification from a state or local health official that a project is necessary to avert or correct a public health hazard.

100

V. Receiving Water Usage - Affected By Existing Discharge

Points

a) Freshwater/Groundwater

- 1) Drinking and food processing 100
- 2) Propagation of fish and shellfish used as a food source 50
- 3) Water contact recreation 20

b) Marine water

- 1) Propagation of fish and shellfish as a food source 50
- 2) Water contact recreation 20

VI. Project Continuity

Points

- a) Award of a Step 1 grant or approval of a facility plan developed without a grant qualifies the project for 100 points to help insure sufficient funding to complete the project. 100
- b) Award of a Step 2 or 2 & 3 grant or approval of plans and specifications completed without a grant award qualifies the project for an additional 100 points to help insure sufficient funding to complete the project. 100
- c) Step 3 projects, where construction is phased over several years or where rehabilitation or corrective measures are required to improve the efficiency of existing sewerage facilities constructed under a previous grant shall qualify for an additional 50 points. 50

VII. Project Step Points

- a) Approved initial application and plan of study 30
- b) Approved facility plan 20
- c) Approved final design plans and specifications 10

VIII. Existing Population Benefiting from Project Points

- a) under 1,000 30
- b) between 1,000 and 3,500 50
- c) between 3,500 and 10,000 70
- d) over 10,000 100

IX. Alternative or Innovative Points

Step 2, 2 & 3, or 3 projects identified in an approved facility plan as containing alternative or innovative technology components shall qualify for 50 points in addition to all other points awarded to the project. 50

PROJECT PRIORITY LIST FOR THE ALLOCATION OF  
FEDERAL WATER POLLUTION CONTROL GRANT FUNDS FOR FFY 80

The FFY 80 "Project Priority List" consists of sewage system improvements required in the five year period 1979-1984. The list prioritizes 76 projects, each awarded a numerical score derived in accordance with procedures established in the Criteria System. The fundable portion of the Priority List is represented by those projects targeted for grant award during FFY 80. The remaining projects represent the extended portion of the Priority List and will be funded from future federal appropriations.

In addition to the \$44,984,482, the state must obligate \$6,443,343 from the FFY 78 appropriation by October 1, 1979 or lose it to reallocation. It is anticipated that the following projects will receive grants prior to October 1, 1979:

Palmer-West Interceptor Step 4	\$1,315,703
Soldotna - Step 3	2,175,000
Sitka - Step 3 - Phase I	3,675,000
Eagle River - Step 3	3,765,000
State Management Assistance Grant	154,651
	<u>\$11,085,354</u>

Program funding available for FFY 80 is estimated at \$46,984,482 and is comprised from the following Congressional appropriations:

1) FFY 77 Supplemental Carryover	\$ 3,162,861
2) Title III - Public Works Employment Act of 1976	4,263,723
3) FFY 79 Appropriation*	20,527,414
4) FFY 80 Appropriation (based on \$3.8 billion)	17,000,000
5) FFY 76-73 Carryover	30,484
	<u>\$44,984,482</u>

If the above grants are awarded by October 1, 1979 the FFY 78 appropriation will be depleted and the FFY 79 appropriation will be reduced by \$4,642,011 to \$15,885,403. Therefore, the dollars available for obligation during FFY 80 may be reduced to \$40,342,471. These projects do not appear on the attached priority list since it is expected that they will be awarded prior to October 1, 1979. However, in the event that any of these projects do not receive grant awards by the expiration date of the FFY 79 priority list, they will be placed on the fundable portion of the FFY 80 priority list to be awarded grants from available funds.

For planning purposes the Department assumes that annual federal appropriations to Alaska will be \$22,500,000, through 1984. The total five year funding available is estimated at \$132.5 million. The five year project list, adjusted for inflation, estimated at \$121.7 million will likely exceed the available funding resources, since reserve accounts must be established from these funding sources.

\*This balance may be reduced by additional grant awards prior to the adoption of the Priority List, effective October 1, 1979.

The following reserve accounts will be established from the \$40,342,471 estimated to be available for obligation to projects during FFY 80:

1) Reserve for a State Management Assistance Grant to the Department of Environmental Conservation	\$ 814,180
2) Two percent of FFY 80 federal allocation plus FFY 79 Carryover to establish a reserve for increasing funding up to 85 percent for eligible projects incorporating alternative and innovative technology	772,817
3) Four percent of the FFY 80 federal allocation plus FFY 79 Carryover to establish a reserve to fund alternatives to conventional treatment in communities with populations of 3,500 or less, or sparsely populated areas of larger communities	1,428,137
4) Grant increase reserve	3,500,000
5) Reserve for unidentified Step 1 & 2 projects that have a priority ranking high enough to place the project on the fundable portion of the Priority List	100,000
6) Reserve established for State designation to fund project increases that occur prior to grant award.	3,248,337
Total Reserves	<u>\$9,863,471</u>

Therefore, \$30,479,000 will be available for obligation to projects targeted for grant award during FFY 80. Funds not obligated during FFY 80 will be reprioritized for obligation on the FFY 81 Priority List.

STATE OF ALASKA  
FFY 80  
PROJECT PRIORITY LIST

Rank	Project	Score	EPA Project Number	Project Step	Target Award Date	Project Description *	Est. Eligible Cost \$1,000	EPA Grant Amount \$1,000	Cummulative Total \$1,000	FFY 80 Cummulative Total \$1,000
1	Seward	974	C-020051-03	3	80	STP - INT	6,782	5,087	5,087	5,087
2	Bristol Bay Borough King Salmon	971	C-020081-02	2 & 3	80	STP - INT	2,762	2,072	7,159	7,159
3	Kodiak Island Borough Island Lake	920	C-020069-02	2	80	INT	325	244	7,403	7,403
4	Kodiak Island Borough Island Lake	910	C-020069-03	3	81	INT	4,837	3,628	11,031	-----
5	Ketchikan - Phase II	880	C-020053-04	3	80	STP	8,750	6,563	17,594	13,966
6	Nome	860	C-020062-03	3	81	INT	2,378	1,784	19,378	-----
7	Anchorage - West Interceptor	840	C-020087-04	3	81	INT	7,500	5,625	25,003	-----
8	Sitka - Phase II	819	C-020052-04	3	80	STP - INT	10,500	7,875	32,878	21,841

9	Kenai	818	C-020077-03	3	80	STP - INT	4,415	3,311	36,189	25,152
10	Fairbanks - Ballaine Lake	770	C-200083-02	2	80	INT	80	60	36,249	25,212
11	Wasilla	768	C-020073-02	2	81	STP - INT	450	338	36,587	-----
12	Naknek	760	C-020082-02	2 & 3	82	STP - INT	2,762	2,072	38,659	-----
13	Fairbanks - Ballaine Lake	760	C-020083-03	3	81	INT	800	600	39,259	-----
14	Wasilla	758	C-020073-03	3	82	STP - INT	5,053	3,790	43,049	-----
15	Fairbanks - Sludge Disposal Study	740	C-020088-02	2	80	UPGRADE	200	150	43,199	25,362
16	Sitka - Phase III	730	C-020052-05	3	82	INT	2,620	1,965	45,164	-----
17	Fairbanks - Sludge Disposal Study	730	C-020088-03	3	81	UPGRADE	2,000	1,500	46,664	-----
18	Petersburg - I/I Rehabilitation	730	C-020091-01	1	80	REHAB	40	30	46,694	25,392
19	Wrangell - I/I Rehabilitation	730	C-020092-01	1	80	REHAB	76	57	46,751	25,449
20	Eagle River Road Interceptor	730	C-020061-05	3	80	INT	900	675	47,426	26,124
21	Unalaska	711	C-020062-02	2	80	STP - INT	550	413	47,839	26,537

22	Petersburg - I/I Rehabilitation	720	C-020091-02	2 & 3	81	REHAB	240	180	48,019	-----
23	Wrangell - I/I Rehabilitation	720	C-020092-02	2 & 3	81	REHAB	200	150	48,169	-----
24	Skagway - I/I Rehabilitation	710	C-020090-01	1	80	REHAB	40	30	48,199	26,567
25	Unalaska	701	C-020064-03	3	81	STP - INT	7,200	5,400	53,599	-----
26	Skagway - I/I Rehabilitation	700	C-020090-01	2 & 3	81	REHAB	160	120	53,719	-----
27	Seldovia	682	C-020071-02	2 & 3	81	STP - INT	2,026	1,520	55,239	-----
28	Barrow	680	C-020085-01	1	80	STP	100	75	55,314	26,642
29	Fairbanks - Airport Interceptor	680	C-020084-01	1	82	INT	40	30	55,344	-----
30	Barrow	670	C-020085-02	2	82	STP	500	375	55,719	-----
31	Fairbanks - Airport Interceptor	670	C-020084-02	2	83	INT	600	400	56,119	-----
32	Anchorage - STP Expansion	670	C-020087-10	2	82	STP	1,150	863	56,982	-----
33	Anchorage - S.E. Interceptor O'Malley to E-4 Trunk	670	C-020087-03	2	80	INT	200	150	57,132	26,792
34	Anchorage - S.E. Interceptor E-4 Trunk to E-6 Trunk	670	C-020087-06	2	81	INT	30	23	57,155	-----

35	Anchorage - S.E. Interceptor E-6 to ½ Mile So. of Huffman Rd	670	C-020087-13	2	82	INT	34	26	57,181	-----
36	Anchorage - S.E. Interceptor ½ Mi. So. of Huffman Rd to E-7 Trunk	670	C-020087-17	2	83	INT	77	58	57,239	-----
37	Barrow	660	C-020085-03	3	83	STP	6,000	4,500	61,739	-----
38	Fairbanks - Airport Interceptor	660	C-020084-03	3	84	INT	7,420	5,565	67,304	-----
39	Anchorage - STP Upgrade	660	C-020087-02	3	80	UPGRADE	2,181	1,636	68,940	28,428
40	Anchorage - STP Expansion	660	C-020087-16	3	83	STP	16,550	12,413	81,353	-----
41	Anchorage - S.E. Interceptor O'Malley to E-4 Trunk	660	C-020087-05	3	81	INT	1,600	1,200	82,553	-----
42	Anchorage - S.E. Interceptor E-4 Trunk to E-6 Trunk	660	C-020087-09	3	81	INT	418	314	82,867	-----
43	Anchorage - S.E. Interceptor E-6 Trunk ½ Mi. So. of Huffman Rd	660	C-020087-14	3	82	INT	475	356	83,223	-----
44	Anchorage - S.E. Interceptor ½ Mi. So. of Huffman Rd to E-7 Trunk	660	C-020087-18	3	83	INT	1,077	808	84,031	-----
45	Pelican	630	C-020057-02	2 & 3	82	STP - INT	800	600	84,631	-----
46	Ketchikan - Phase III	630	C-020053-05	3	81	INT	1,000	750	85,381	-----
47	Homer STP Expansion	600	C-020093-01	1	80	STP	40	30	85,411	28,458

48	Eagle River - Fire Lake Int. - Phase I	600	C-020061-03	2	80	INT	110	83	85,494	28,541
49	Eagle River - N. Valley Int. - Phase I	600	C-020061-04	2	80	INT	250	188	85,682	28,729
50	Eagle River - Fire Lake Int. Phase III	600	C-020061-09	2	82	INT	200	150	85,832	-----
51	Eagle River - N. Valley Int. Phase II	600	C-020061-06	2	81	INT	100	75	85,907	-----
52	Cordova - Phase III(6)	590	C-020068-03	2 & 3	80	INT	374	281	86,188	29,010
53	Eagle River - Fire Lake Int. - Phase I	590	C-020061-07	3	81	INT	700	525	86,713	-----
54	Homer - STP Expansion	590	C-020093-02	2	82	STP	300	225	86,938	-----
55	Eagle River - N. Valley Int. - Phase I	590	C-020061-08	3	81	INT	1,937	1,453	88,391	-----
56	Eagle River - N. Valley Int. - Phase II	590	C-020061-10	3	82	INT	900	675	89,066	-----
57	Eagle River - Fire Lake Phase II	590	C-020061-11	3	83	INT	1,015	761	89,827	-----
58	Homer STP Expansion	580	C-020093-03	3	83	STP	3,200	2,400	92,227	-----
59	Anchorage - Outfall Extension	570	C-020087-15	2	82	STP	1,250	938	93,165	-----
60	Anchorage - Outfall Extension	560	C-020087-19	3	83	STP	8,750	6,563	99,728	-----

61	Dillingham	550	C-020066-02	2 & 3	80	STP	1,900	1,425	101,153	30,435
62	Anchorage - Pump Stations #2	540	C-020087-07	2	81	INT	180	135	101,288	-----
63	Anchorage - Fish Creek F.M. #2	540	C-020087-08	2	81	INT	120	'90	101,378	-----
64	Wainwright	535	C-020094-01	1	80	STP - INT	58	44	101,422	30,479
65	Anchorage - Pump Station #2	530	C-020087-11	3	82	INT	1,320	990	102,412	-----
66	Anchorage - Fish Creek F.M. #2	530	C-020087-12	3	82	INT	680	510	102,922	-----
67	Wainwright	525	C-020094-02	2	81	STP - INT	300	225	103,147	-----
68	Wainwright	515	C-020094-03	3	82	STP - INT	3,600	2,700	105,847	-----
69	Soldotna Funny Road Interceptor	500	C-020095-01	1	81	INT	40	30	105,877	-----
70	Juneau - Channel Interceptor	490	C-020048-02	3	83	INT	600	450	106,327	-----
71	Soldotna - Funney R. Road	490	C-020095-02	2 & 3	82	INT	1,400	1,050	107,377	-----
72	Willow	455	C-020089-01	1	82	STP - INT	180	135	107,512	-----
73	Willow	445	C-020089-02	2	83	STP - INT	1,800	1,350	108,862	-----

74	Willow	435	C-020089-03	3	84	STP - INT	15,000	11,250	120,112	-----
75	Fairbanks - E. Farmers Loop	430	C-020078-01	1	82	INT	40	30	120,142	-----
76	Fairbanks - E. Farmers Loop	420	C-020078-02	2	83	INT	180	135	120,277	-----
77	Fairbanks - E. Farmers Loop	410	C-020078-03	3	84	INT	1,955	1,466	121,743	-----

\*STP - Sewage Treatment Plant  
 INT - Interceptor Sewer  
 REHAB - Rehabilitation Project

Community	Probable Project	Est. Cost
Cordova	Baler & Balefill	\$800 K
Yakutat	Landfill Upgrade	\$25 K
Skagway	New Landfill, Incinr., or?	\$150 K
Hoonah	New Landfill, Equip.	\$266 K (PHS-\$77)
Petersburg	Upgrade or New Disp. Sys.	\$25-200 K
Wrangell	Upgrade or New Disp. Sys.	\$25-250 K
Ketchikan	Landfill & Incin.	\$900 K
Valdez	New Landfill & (?)	\$100-1500 K
Kodiak	New Landfill, Sludge Disp.	650 K
Bristol Bay Borough	New Landfill	50 K
Bethel	?	N.A.
Nome	Landfill Upgrade	50-150
Barrow	Landfill and (?)	N.A.
Mat-Su Borough	New Landfill & Other Improvements	\$400-800 K
Pelican	New Landfill	N.A.
Angoon	Upgrade Landfill	\$25 K
Craig-Klawock	Upgrade Landfill	\$25 K
Anchorage	Ft. Rich Boiler Upgrade, etc.	>\$1 million
Large # of rural communities	{ Burning devices, disposal facility, sludge or honey bucket disposal, etc.	10-150 K each
Deadhorse	Additional Shredder	N.A.
Unalaska	New Landfill	N.A.
Kenai Peninsula Borough	Landfill Improvements	400,000

Bush Projects

Construction Grants

North Slope Borough  
Point Lay  
Barrow  
Wainwright  
Atkasook  
Anaktuvuk Pass  
Nuiqsut  
Point Hope  
Deadhorse

Nome  
Bethel  
Dillingham  
King Salmon  
Naknek  
Sand Point  
King Cove  
Nenana  
Tanana  
Yakutat  
Craig  
Klawock  
Kake  
Saxman  
Pelican  
Unalaska

VSW

Pitkas Point  
Chevak  
Selawik  
Council  
Koyukuk  
Alakanuk  
Beaver  
Tanana  
Norhway  
Kongiganak  
Akiachak  
Nulato  
SD 49  
Point Lay  
Kgnuk  
Cooper Bay  
Kobuk  
Bethel  
Kotzebue  
Cantwell  
Shaktoolik  
Kotlik  
Koyuk  
McGrath

Introduced: 1/24/79  
Referred: Community &  
Regional Affairs

1 IN THE HOUSE

BY CHATTERTON

2 HOUSE BILL NO. 68

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 ELEVENTH LEGISLATURE - FIRST SESSION

5 A BILL

6 For an Act entitled: "An Act transferring responsibility for administration  
7 of the Village Safe Water Act; and providing for an  
8 effective date."

9 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

10 \* Section 1. AS 46.07.080(1) is amended to read:

11 (1) "commissioner" means the commissioner of transportation  
12 and public facilities [ENVIRONMENTAL CONSERVATION];

13 \* Sec. 2. This Act takes effect July 1, 1979.

14 CHAT:

15 FROM DEC. SESSION

16 PASSED IN 1970

17 AMENDED IN 1975

18 FROM BILLS

19 HOLLANDER FROM CONGRESS WITH AISH AND GOME

20 VILLAGES 25 TO 600 WITHIN 2 MILES

21 INCORPORATED VILLAGES ARE SOMETIMES LESS

22 CLOCKIN:

23 TENTATIVE

24 HAROLD SPARK, BETHEL

25 DO NOT PASS

26 DEC. 'OUTSTANDING' IN ECONOMY AND PLANNING

27 COST OF TRANSFER,

28 ADVISORY COMMITTEE.

29 JOHN SCRIBNER, DEC. DIR. OF WATER

30 \* GREG. CARPIS, SENIOR PLANNER, DEC

31 BOWING, LAUNDRY, DRAINING, WASTE DISPOSAL. HB 68

32 2 3/4 ON STATE FUNDS ADMINISTERING PROGRAM.

33 TROUBLE.

VSW PROBLEMS

1) PLANNING

2) CONSTRUCTION <sup>2/3</sup> MIL SA FOR (5 1/2 BUILT, 1 GROUND)

3) OPERATION & MAINTENANCE

PUBLIC HEARD ALSO HAS A PROGRAM

DIT NO OF + CHINT

P.H. PROGRAM TO THEM LONGER

SOMETIMES A VILLOGE JUST TAKE OVER AND RUN WITH IT

ALBANY

ORDER THE NEW AREA

CONTINUING

TECHNICAL ASSISTANCE

DEE GREENS

ROAD

SERVICE 180

FORCE ACCOUNTING / CONSTRUCTION

MANAGEMENT

VILLAGE SAFE WATER PROGRAM  
An Update to January 20, 1977

*for* DEC

Introduction

The Village Safe Water Act (AS 46.07), passed in 1970, calls for "at least one facility for safe water and hygienic sewage disposal in each village" in Alaska. Little progress was made in the program until December of 1972 due to lack of funds, inability to hire someone to administer the Village Safe Water (VSW) program, and lack of operation and maintenance provisions. Since 1972, six VSW facilities have been constructed, two more are nearly complete, and another is being designed. In addition, an operation and maintenance support program and a comprehensive planning effort have been organized and initiated.

Construction

The six VSW facilities constructed to date are in the villages of Northway, Chevak, Alakanuk, Selawik, Nulato and Pitkas Point. A facility will be completed in Beaver in January, 1977, and in Koyukuk in February of 1977. A facility for Kongiganak is being designed, and construction is scheduled for summer of 1977.

At the nine locations listed above, the VSW projects consist of central sanitation facilities to which village residents can come to obtain water supply, sewage disposal, bathing and laundry services. No piped water distribution or sewage collection systems are involved except for water and sewer service lines to schools.

Construction methods used so far have included: 1) competition bid construction contracts administered by the Alaska Department of Public Works, 2) competitive bid construction contracts administered by the Alaska Department of Environmental Conservation (ADEC), and 3) force account construction by the villages through construction management contracts with engineering consultants. All facilities so far have been designed by engineering consultants.

The force account/construction management method of construction has been the most satisfactory of the three methods used. Facilities constructed that way have been built cheaper and faster than those built under competitive bid construction contracts; the quality of construction has been better; and the villages have been more intimately involved in, and satisfied with, their projects.

VSW facilities have cost from \$350,000 at Pitkas Point (begun in FY 76) to almost \$1,200,000 at Selawik (begun in FY 74). Villages served have ranged in size from 85 (Pitkas Point) to over 500 (Selawik).

#### Operation and Maintenance

Experience in the VSW program has confirmed that virtually any utility system installed in remote Alaskan villages is doomed to eventual failure unless the village is given financial, technical, and/or management assistance. Any program for providing utilities in rural Alaska must either adequately provide for long term operation and maintenance, or expect system failures that adequate operation, maintenance and management could have prevented.

In FY 76, the annual operating budgets for VSW facilities ranged from \$28,000 at Northway to over \$100,000 at Selawik. ADEC provided a total of about \$225,000 in VSW operation and maintenance grants in FY 76 to six villages. In addition, ADEC provided technical and management assistance to the six villages. Although expensive, the VSW operation and maintenance support program has made it possible for all completed VSW facilities to serve the public as intended.

#### Comprehensive Planning

ADEC is developing a comprehensive plan intended to define the roles of State and federal agencies and other groups involved in providing rural sanitation services. An early step in this planning is to inventory all village sanitation facilities. Completing this inventory is viewed as the cornerstone of the VSW planning effort.

The Ninth Alaska Legislature passed a resolution suggesting that a VSW advisory committee be organized consisting of representatives from the 12 Native Regional Service Associations. This committee would assist ADEC with policy and management decisions concerning the VSW program. The Department feels the advisory committee is a good idea and welcomes increased involvement for the Regional Associations.

Several local, State, federal and private organizations participate either directly or indirectly in providing rural sanitation services. A strong working relationship must be developed among the diverse groups if a comprehensive plan for sanitation services throughout rural Alaska is to be successfully developed and implemented.

Goals and Objectives  
VSW Comprehensive Planning

GOAL

To develop a statewide comprehensive program for providing sanitation services in rural Alaska.

PLAN OBJECTIVES

1. Inventory existing water supply and sewage disposal facilities in rural Alaskan villages.
2. Develop criteria for evaluating the adequacy of existing water supply and sewage disposal facilities identified in # 1 above.
3. Identify existing agency programs providing sanitation facilities to Alaskan villages. Quantify the resources currently available. Identify and describe the technical, management and administrative approaches presently used.
4. Develop criteria to evaluate the effectiveness of these programs.
5. Evaluate the adequacy of technical, management and administrative approaches identified in #3. above.
6. Identify and evaluate alternative technical, administrative and management methods that might be used to address sanitation needs in rural Alaska.
7. Recommend changes in the activities and resources of existing programs to incorporate the alternatives noted in # 6 above. Recommend new programs and/or authority necessary for implementation.
8. Analyze existing methods of operation, maintenance and management of village sanitation facilities.

9. Develop alternative methods for operation, maintenance and management of village sanitation facilities.
10. Recommend changes in the activities and resources of existing programs to incorporate the alternative approaches noted in #9 above.
11. Integrate the findings of the above analysis with the comprehensive plan.
12. With the assistance of the appropriate governmental agencies and Native non profit regional associations, proceed to implement the plan.

#### PUBLIC INVOLVEMENT & PROGRAM COORDINATION

Because several local, State and federal organizations participate either directly or indirectly in developing rural sanitation facilities, this major planning effort can not be undertaken alone. To insure proper plan development and implementation, a strong working relationship must be developed among the diverse groups currently working on rural sanitation problems.

Public participation and inter-agency coordination must be an integral part of the VSW comprehensive planning process. In this regard, a maximum effort will be made to enlist the active participation of the native regional health organizations, the villages and appropriate federal and state agencies. We hope that by the time a draft of the plan has been formulated, significant public comment and coordination will have been obtained. The results of our collective efforts will be a comprehensive plan for providing rural sanitation services in Alaska.

#### Principal Contact

For more detailed information on the Village Safe Water comprehensive planning process, please contact:

Greg Capito  
Senior Planner  
Alaska Department of Environmental Conservation  
Pouch O  
Juneau, Alaska 99811  
Phone: 465-2664



Official Business

# Alaska State Legislature

## House of Representatives

Committee on

Community & Regional Affairs

Pouch V  
State Capitol  
Juneau, Alaska 99811

TO: ALL COMMITTEE MEMBERS

FROM: REP. BILL PARKER, Chairman

RE: HB 68 relating to the Village Safe Water Act

The following recommendations are excerpted from the Governor's Management and Efficiency *Review Report*

### Recommendations

#### 254. Discontinue construction of village safe water projects.

The village safe water program is financed completely by the state and there is substantial concern about its effectiveness. The program applies to villages with population ranges of from 25 to 600 persons. Approximately \$5-million has been spent to complete eight projects and three more are scheduled.

A fiscal 1977 request of \$2-million has been made for the program plus an additional \$300,000 for annual maintenance work. The maintenance figure could double as additional projects are completed. The villages are unable to operate and maintain the facilities and a decision must be made on the future of the program.

In view of the inability of the villages to run these facilities successfully, the construction program should be discontinued. As some of the native corporations involved become more experienced, they could contract with the state for such a program, recognizing that rural water and waste disposal systems are almost never financially self-sustaining. Implementation would result in an estimated one-time cost avoidance of \$2-million and an annual saving of approximately \$300,000.

*pp. 130, 131*

The final implementation report of the Governor's Management and Efficiency Review states that this particular recommendation has not been implemented. (See p.10)