

# HB

# 209

<TARGET><BILL>HB 209</BILL><SUBJECT>HB  
209</SUBJECT><COMM>HFIN29</COMM></TARGET>



# Fiscal Note

State of Alaska  
2016 Legislative Session

Bill Version:	CSHB 209(CRA)
Fiscal Note Number:	1
(H) Publish Date:	3/25/2016

Identifier: HB209-LEG-COU-03-15-16  
 Title: WATER AND SEWER ADVISORY COMMITTEE  
 Sponsor: FOSTER  
 Requester: H C&RA

Department: Alaska Legislature  
 Appropriation: Legislative Council  
 Allocation: Council and Subcommittees  
 OMB Component Number: 783

**Expenditures/Revenues**

Note: Amounts do not include inflation unless otherwise noted below. (Thousands of Dollars)

	FY2017	Included in	Out-Year Cost Estimates				
	Appropriation Requested	Governor's FY2017 Request	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
<b>OPERATING EXPENDITURES</b>	<b>FY 2017</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants & Benefits							
Miscellaneous							
<b>Total Operating</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

**Fund Source (Operating Only)**

None							
<b>Total</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

**Positions**

Full-time							
Part-time							
Temporary							

<b>Change in Revenues</b>							
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Estimated SUPPLEMENTAL (FY2016) cost: 0.0 *(separate supplemental appropriation required)*  
*(discuss reasons and fund source(s) in analysis section)*

Estimated CAPITAL (FY2017) cost: 0.0 *(separate capital appropriation required)*  
*(discuss reasons and fund source(s) in analysis section)*

**ASSOCIATED REGULATIONS**

Does the bill direct, or will the bill result in, regulation changes adopted by your agency?  
 If yes, by what date are the regulations to be adopted, amended or repealed?

**Why this fiscal note differs from previous version:**

N/A Initial Version
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Prepared By:	Jessica Geary, Finance Manager	Phone:	(907)465-6626
Division:	LAA	Date:	03/15/2016 12:00 AM
Approved By:	Pam Varni, Executive Director	Date:	03/15/16
Agency:	LAA		

## FISCAL NOTE ANALYSIS

STATE OF ALASKA  
2016 LEGISLATIVE SESSION

**Analysis**

HB209 Establishes an Alaska Water and Sewer Advisory Committee within the Legislative Branch. It consists of nine members; two members from the House of Representatives and two members from the Senate. The other four members are members of federal and state agencies and members of the public. The members serve without compensation and may not receive travel and per diem expenses. The committee shall meet during and between legislative sessions either electronically or telephonically. Because no travel expenses are authorized, this legislation has zero fiscal impact on the Legislative Affairs Agency.

**CS FOR HOUSE BILL NO. 209(FIN)**

**IN THE LEGISLATURE OF THE STATE OF ALASKA**

**TWENTY-NINTH LEGISLATURE - SECOND SESSION**

**BY THE HOUSE FINANCE COMMITTEE**

**Offered:  
Referred:**

**Sponsor(s): REPRESENTATIVE FOSTER**

**A BILL**

**FOR AN ACT ENTITLED**

1 **"An Act relating to an Alaska Water and Sewer Advisory Committee; and providing for**  
2 **an effective date."**

3 **BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:**

4 \* **Section 1.** The uncodified law of the State of Alaska is amended by adding a new section  
5 to read:

6 LEGISLATIVE FINDINGS. The legislature finds that over 6,000 families in the state  
7 do not have safe potable water or safe sanitation systems in their homes. Of the over  
8 \$100,000,000,000 earned by the state in oil revenue since 1977, less than one-half of one  
9 percent was expended on rural water and sewer projects. In an effort to protect the public  
10 health and welfare of the state's citizens and promote healthy communities, the legislature  
11 finds that it is the responsibility of the legislature to ensure that safe and sustainable water and  
12 sewer systems are provided for all communities of the state.

13 \* **Sec. 2.** The uncodified law of the State of Alaska is amended by adding a new section to  
14 read:

1 ALASKA WATER AND SEWER ADVISORY COMMITTEE. (a) The Alaska Water  
2 and Sewer Advisory Committee is created in the legislative branch.

3 (b) The advisory committee consists of 10 members, as follows:

4 (1) one member of the senate appointed by the members of the bush caucus;

5 (2) one member of the house of representatives appointed by the members of  
6 the bush caucus;

7 (3) one member of the senate appointed by the president of the senate;

8 (4) one member of the house of representatives appointed by the speaker of  
9 the house of representatives;

10 (5) one member of the public who is a civil engineer appointed by the  
11 members of the bush caucus;

12 (6) one member who represents an appropriate federal agency appointed by  
13 the members of the bush caucus;

14 (7) one member who represents an appropriate state agency appointed by the  
15 members of the bush caucus;

16 (8) a senior employee with expertise in environmental health and engineering  
17 from a large nonprofit tribal health organization operating in the state appointed by the  
18 members of the bush caucus; and

19 (9) two members of the public who reside in rural communities in the state  
20 that are not connected by road or the Alaska marine highway to the main road system of the  
21 state appointed by the members of the bush caucus.

22 (c) The members of the advisory committee shall select co-chairs from the advisory  
23 committee's legislative membership. One co-chair shall be from the senate, and one co-chair  
24 shall be from the house of representatives.

25 (d) Members serve without compensation and may not receive travel and per diem  
26 expenses.

27 (e) The advisory committee shall meet during and between legislative sessions to  
28 accomplish its duties. Meetings of the advisory committee may be conducted by  
29 telecommunication or electronic communication.

30 (f) Vacancies on the advisory committee shall be filled in the same manner as the  
31 original appointments.

1 (g) The advisory committee shall develop and submit findings and proposed  
2 legislation addressing the provision of safe and sustainable water and sewer systems to all  
3 rural areas of the state. The advisory committee shall prepare a report with the advisory  
4 committee's findings and proposed legislation by December 1, 2017, deliver the report to the  
5 senate secretary and the chief clerk of the house of representatives, and notify the legislature  
6 that the report is available on or before the first day of the Second Regular Session of the  
7 Thirtieth Alaska State Legislature. In developing its findings and legislation, the advisory  
8 committee shall, to the extent possible,

9 (1) establish an accurate estimate of the number of homes without safe water  
10 and sewer systems;

11 (2) determine the state's needs in providing safe water and sewer systems to  
12 rural residents and establish a methodology for determining which projects should be  
13 prioritized among those needs;

14 (3) explore which water and sewer system technologies are most appropriate  
15 for use in rural communities in the state;

16 (4) research water and sewer systems used in other Arctic nations;

17 (5) determine means by which state and federal resources, funds, and agencies  
18 might be better coordinated to construct, maintain, and service water and sewer systems;

19 (6) investigate and recommend strategies to protect public investments in rural  
20 water and sewer systems and promote the long-term operational life of rural water and sewer  
21 systems by ensuring, to the greatest extent practicable, that the systems can be maintained by  
22 local personnel and with local resources;

23 (7) investigate and evaluate previous state and federal efforts to provide water  
24 and sewer systems in rural areas of the state;

25 (8) consult with representatives of appropriate state and federal agencies  
26 regarding how safe water and sewer systems might be more quickly provided to the rural  
27 areas of the state; and

28 (9) hold public hearings and employ other means the advisory committee  
29 determines will best solicit useful information on rural water and sewer needs from the  
30 residents of the state.

31 (h) In the preparation of the report described in (g) of this section, the advisory

1 committee may use only existing legislative resources and staff.

2 (i) In this section, "bush caucus" means a group of legislators that represents the  
3 following communities: Akiachak, Alatna, Allakaket, Arctic Village, Atmautluak, Birch  
4 Creek, Chalkyitsik, Chefornak, Circle, Crooked Creek, Diomedes, Eagle, Eek, Kipnuk,  
5 Kivalina, Kongiganak, Koyukuk, Kwigillingok, Lime Village, Newtok, Oscarville, Shageluk,  
6 Shishmaref, Stebbins, Stevens Village, Stony River, Takotna, Teller, Tuluksak, Tuntutuliak,  
7 Tununak, Venetie, and Wales.

8 \* **Sec. 3.** The uncodified law of the State of Alaska is amended by adding a new section to  
9 read:

10 TRANSITION. The advisory committee shall begin work as soon as a majority of its  
11 membership has been appointed.

12 \* **Sec. 4.** Sections 1 and 2 of this Act are repealed July 1, 2018.

13 \* **Sec. 5.** This Act takes effect immediately under AS 01.10.070(c).

ADOPTED 4/4/16

29-LS0306P  
Nauman  
4/4/16

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28 (9) hold public hearings and employ other means the task force determines  
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April 1, 2016

## Comments on HB 254 Extend Big Game Commercial Services Board

Resident Hunters of Alaska (RHAK) strongly **opposes** HB 254 to extend the termination date of the Big Game Commercial Services Board (BGCSB).

We would like to point out at the outset that the report, *A Sunset Review of the Department of Commerce, Community, and Economic Development, Big Game Commercial Services Board*, mistakenly implies in its report conclusions on the cover page that the BGCSB has anything at all to do with ensuring that federally regulated Part 135 air taxis who transport hunters to and from the field are “qualified to do so.”

The only entity that provides “reasonable assurance” that individuals licensed to commercially carry any class of air passengers to and from the field are qualified to do so is the Federal Aviation Administration and the federal Department of Transportation.

The entire “transporter” system now attached to the BGCSB as it applies to air-charter transportation of hunters to and from the field is one of the main reasons why this Board should be sunsetted and **not** extended.

Currently there is a BGCSB Transporter Sub-Committee operating within the Board. This committee will meet by teleconference on April 7<sup>th</sup>, 2016 to discuss, among other things, the legality of the state trying to regulate federally-regulated commercial air carriers under the “transporter” system, and the new fees imposed on “transporters” for hunt-activity reports they are required to file.

As to the former topic, there is case law that demonstrates that federally regulated Part-135 air-taxis that also hold a federal Department of Transportation certificate are preempted within Alaska from any further city or state regulations governing routes, tariffs, or advertising. Currently the Alaska Air Carriers Assn and the BGCSB Transporter Sub-Committee are seeking a legal opinion on this matter. Should the legal opinion hold that the BGCSB has no authority to regulate federally regulated air carriers who hold a federal DOT certificate, it would make the entire “transporter” system as it relates to air carriers untenable.

As to the latter topic to be discussed at the BGCSB Transporter Sub-committee meeting on April 7<sup>th</sup>, many of the air carriers that *choose* to be a “transporter” – and this is an important distinction to recognize; not all air carriers who transport hunters to and from the field *choose* to be a “transporter,” in fact many of the major air-taxis who fly hunters are not “transporters” – are requesting the new fees for mandated transporter hunt activity reports be reduced or rescinded entirely, and those who say they will remain as

“transporters” will be forced to shift these new costs on to their clientele, most of whom are resident hunters.

We want to stress that the BGCSB was never intended to regulate resident hunters in any way, shape, or form. The clear intent of adding on this “transporter” system to the guide board’s authority was so the guide industry could regulate the access of unguided hunters who compete with commercial guiding activities. But this was really never under the authority of the BGCSB. Only the Board of Game has the authority to restrict or limit the number of hunters in the field, or how those hunters can access the field, via such avenues as permit hunts and controlled use areas.

If the main focus of whether or not to extend or sunset the BGCSB revolves around the ability of the Board to pay off its debt, then we would ask legislators to consider the fact that the Board will soon engage in open discussion and vote on whether or not to reduce or eliminate the new transporter fees. Neither the Chairman of the Board or any of its members can tell the legislature with any kind of certainty that the Board will not vote to reduce or eliminate those fees. Too, as stated, many air-carriers currently with “transporter” licenses have stated they will forego their “transporter” license if these new fees are not reduced or eliminated. So when the legislature looks at the current budget predictions for the BGCSB, please note that the Board’s ability to pay off its debt is very much dependent on these new transporter fees and at minimum retaining the current number of “transporters” within the system to pay those fees.

In closing, Resident Hunters of Alaska would have no issues with the BGCSB if it returned to its original purpose: regulating the Big Game Guiding industry. Alaska Statute 08.54.600 defines the Board’s functions, and nowhere within that statute does it say anything about regulating air carriers that fly hunters to and from the field, or imposing additional fees on unguided hunters using an air taxi for transportation services ...in order to fund the guide board’s activities.

“Transporters” had absolutely no role in the Board’s incurred million-dollar debt. Burdening “transporters” – and particularly the resident Alaskan hunter who uses air-taxi transporters to access the hunting grounds – with these new \$50 fees is unwarranted and unfair. The entire “transporter” system within the BGCSB as it relates to air carriers needs to be abandoned.

We urge the legislature to sunset this Board now. We don’t believe it is operating as intended by the legislature and we question whether or not it truly will ever be self-funding in way that puts those costs on the intended licensees it is designated to oversee.

Sincerely,

Mark Richards

Executive Director Resident Hunters of Alaska

Alaska Chapter SCI  
PO Box 770511  
Eagle River, AK 99577  
(907) 980-9018



April 4, 2016

The Honorable Steve Thompson, Co-Chair  
Alaska House Finance Committee  
Alaska State Capitol  
Juneau, AK 99801

Dear Representative Thompson:

I am writing to express support for extending the sunset date for the Big Game Commercial Services Board (BGCSB). It is our strong belief that the guiding and transport businesses need to be managed for the utmost in professional standards due to the potential life threatening situations inherent in the associated activities, as well as the fact that these professions are utilizing highly prized resources belonging to all Alaskans.

SCI Alaska Chapter is the leading hunter-conservationist group in Alaska with a proven record of support for conservation (wood bison restoration), outdoor education (Becoming an Outdoors-Woman classes), humanitarian services (1000's of pounds of protein donated to the food bank) and of course advocacy for the freedom to hunt. Our members are influential community and business leaders from across the state who are committed to sustainable opportunities based on scientific management.

The State of Alaska has many professional standards boards. However, few of those regulate an industry that brings with it so many potential situations where life or limb may be jeopardized. For that reason alone, we believe the public needs to have confidence that when contracting with a guide or transporter, that those individuals providing the services have the highest professional credentials. Secondly, those kind of standards must extend to related conservation concerns over the use of our fish and game resources.

Thank you for your time and consideration on our views pertaining to this issue.

Sincerely,

A handwritten signature in black ink that reads 'Eddie Grasser'.

Eddie Grasser, Chair  
AK SCI Gov't Affairs

cc: Rep. Mark Neuman, Co-Chair House Finance  
House Finance Committee Members

**SCI's Top Gun Chapter**

# Alaska House of Representatives

Rep. Neal Foster, Co-Chair  
P.O. Box 1630  
Nome, Alaska 99762

Phone: (907) 443-5036  
Fax: (907) 443-2162



During the Legislative Session  
Alaska State Capitol, Room 434  
Juneau, Alaska 99801

Phone: (907) 465-3789  
Fax: (907) 465-3242

## Chair, House Transportation Committee

### Water & Sewer Task Force Statement

In a 1995 speech to the Alaska Federation of Natives, the State's top executive said, "By the year 2005, I want the honey bucket to be a thing of the past. Alaskans in our villages aren't second-class citizens . . . and they shouldn't live in Third World conditions."

It is now 2016 and there are over eight thousand homes without piped sewer and water systems. Just five years ago that number was six thousand and Village Safe Water estimated it would cost \$650 million to bring those homes on line. The cost and scope of work keeps growing.

The State has consistently funded water and sewer but not at a level that adequately reduces the first-time installation backlog or keeps pace with increasing costs. This funding deficit is further impacted by the need to upgrade, repair, or replace aging or inadequate systems. Currently we use approximately 40% of the funds appropriated to address issues related to previously installed systems. Currently there is \$51.5 million in the State's budget for Village Water & Sewer Projects, which is less than 8% of the known need. Only \$9.5 million of that \$51.5 million comes from state sources.

It is critical that the State develop and implement a funding plan that addresses and reduces this growing deficit. With the decreases in available state revenue, we need to ensure that first-time service needs are addressed cost effectively.

Just throwing money at the problem is not a solution. In the past systems were not always properly matched to their communities. This often left the local utility with a system they could not afford or a system that could not be maintained by local operators.

There are emerging systems and new technologies that will need to be part of the answer. We need a comprehensive look at which solutions are available and which ones fit our conditions. We also need to ensure that we are not building ourselves a financial burden that cannot be sustained.

In short the goal of this Task Force is to find out how the State can solve the rural sanitation problem faster, better and cheaper. We've been doing the same thing for more than fifteen years. It's high time we took another look under the hood.



## Alaska Department of Environmental Conservation Division of Water, Facility Programs

### The Alaska Water and Sewer Challenge Project

#### Summary

The Alaska Department of Environmental Conservation (ADEC) has initiated a project to spur worldwide research to develop innovative and cost effective water and sewer systems for homes in remote Alaska villages. The project focuses on decentralized water and wastewater treatment, recycling, and water minimization. These approaches have a high potential for use in individual homes and housing clusters. Our goal is to significantly reduce the capital and operating costs of in-home running water and sewer in rural Alaska homes.

#### Background

There are currently approximately 3,300 year-round occupied rural Alaska homes that lack running water and a flush toilet (2,300 homes in 35 "unserved" communities and 1,000 homes in served communities). In addition, over 700 homes are served by operation-intensive haul systems. Keeping existing systems operational is a challenge for most villages, and there are approximately 4,500 rural homes that are connected to community-wide piped systems that have surpassed or are nearing the end of their design life.

In 2012, the State began a multi-year research and development project with the goal to significantly reduce the capital and operating costs of in-home running water and sewer in rural Alaska homes. The first two phases were funded with a 2012 state appropriation. The third phase is being funded jointly by the state and the U.S. Environmental Protection Agency.

#### Project Schedule

Phase	Approximate Timeframe	Duration (months)	Comment
1 Team Formation	Fall 2013 – Spring 2014	9	International effort to encourage the formation of joint venture teams. The agency assessed team qualifications.
2 Proposal Development and Presentation	Fall 2014 – Summer 2015	9	Top six teams were funded for written proposal development.
3 <b>Prototype Development and Pilot Testing</b>	<b>Fall 2015 – Summer 2017</b>	<b>21</b>	<b>Top three selected proposals were funded for prototype development and pilot testing in lab.</b>
4 Field System Development and Testing	Fall 2017 – Summer 2019	21	Fund field testing in rural homes for prototypes with demonstrated success.
5 Technology Refinement and Improvement	Fall 2017 – Summer 2018	12+	Address inadequacies or failures identified during testing of field systems with demonstrated success.

### Project Steering Committee

The Steering Committee includes individuals from various tribal, state and federal agencies with knowledge relevant to the technical aspects of this project. The group meets regularly to review the status of work and to make decisions regarding the progression of the project. Key responsibilities include evaluation of Statements of Qualifications, project proposals, prototypes, and the results of field testing. Participating agencies are listed below.

- Drinking Water Compliance and Monitoring, ADEC
- United States Arctic Research Commission
- Indian Health Service – Alaska Area Native Health Service
- Tanana Chiefs Conference – Environmental Health Program
- U.S. Environmental Protection Agency – Alaska Infrastructure Programs
- U.S. Dept. of Agriculture/Rural Development – Rural Alaska Village Grant Program
- Alaska Dept. of Health and Social Services – Epidemiology Program
- Alaska Dept. of Commerce, Community, and Economic Development – Rural Utility Business Advisor & Local Government Assistance programs,

### Performance Targets

At a minimum, household service will consist of a kitchen sink, a bathroom sink, a toilet, a shower, and a tap & drain for a clothes washing machine. The following performance targets have been established for this project. An ideal system would be capable of meeting all these targets, but there may be suitable systems that meet most of these targets but not all, and exceed some targets.

- Acceptance and use by end users
- Water use for health benefits - Systems should be capable of providing a minimum of 15 gallons of useable water per persons per day, comprised of water for drinking and cooking, washing and flushing.
- Operation and maintenance cost - Projected monthly operating costs should not exceed \$135, which is 5% of the Median Household of unserved rural Alaska communities.
- Capital cost
- Constructability and durability
- Feasibility
- Parts availability
- Freeze/thaw recovery capability
- Modularity of household system
- Compliance with plumbing code, wastewater discharge requirements, and other regulations

# Coordination of Efforts to Address Alaska's Rural Water and Sewer Needs

## **Background**

Village Safe Water (VSW) embraces and depends on collaboration with communities, other agencies, and organizations to achieve its goals and objectives. VSW was created in 1972 with the passage of the State Village Safe Water Act. The role of the program is to work with rural communities to develop sustainable water and sewer facilities. In order to accomplish this, the program has three central functions, which include allocation of capital funds, project administration, and program coordination.

## **Funding Allocation**

Currently, funding for water and sewer capital improvements in Alaska villages comes from the State of Alaska and five federal agencies. All funding is allocated using a data system that was jointly developed by VSW, the Alaska Native Tribal Health Consortium (ANTHC) and federal funding partners, including the Indian Health Service and two EPA tribal set-aside programs; USDA-Rural Development; and EPA Alaska Village Grant Program. Each year, this group of agencies works collaboratively to identify funding needs throughout the state, and then allocate funds to address these needs.

An important criterion for allocation of funding is the local capacity to operate and maintain existing facilities. In order to assess this, VSW works closely with the Rural Utility Business Advisor Program in DCCED and the Remote Maintenance Worker Program in DEC. This collaboration continues throughout the design and construction phases.

The disparity between available funding from all sources (\$63.66 million) and the cost of addressing critical health related sanitation needs (\$724 million) is approximately \$660 million. Critical health needs include first time service for homes without piped or covered haul and upgrades or replacement to address substantial health threats.

## **Project Administration**

Once funding is allocated for individual projects, either VSW or ANTHC are assigned as the lead agency and are responsible for project administration throughout the planning, design and construction phases. Projects typically require two to four years to be completed, and both agencies work together to ensure that funding and technical assistance efforts are closely coordinated. Projects are constructed using local labor and overseen using a construction administrator, rather than construction contracting. This method of construction, called (local labor) "force account" construction, is preferred by Alaska villages because it employs and trains local workers. Also, because local residents are involved in construction, they are better able to maintain facilities after project completion.

## **Efforts to Provide Service to Remaining Unserved Homes**

Over 3,300 homes in rural communities still lack indoor water and sewer service. The majority of these homes are located in villages with no centralized water and sewer system. The primary reason these homes and communities are still unserved is due to the high capital and operating costs associated with building and maintaining a centralized system in small, remote communities. Many of these villages have geographical challenges that make water and sewer service extremely challenging, and most households have very low incomes, making it difficult to pay a high monthly water and sewer bill.

## Coordination of Efforts to Address Alaska's Rural Water and Sewer Needs

Besides working with other agencies on funding allocation and project administration, VSW plays a leading role in joint efforts to develop new approaches to address water and sewer needs. In 2012, VSW initiated a new project to spur worldwide research to develop innovative and cost effective water and sewer systems for homes in remote Alaska villages. The project, called "The Alaska Water and Sewer Challenge," focuses on decentralized water and wastewater treatment, recycling, and water minimization. These approaches have a high potential for use in individual homes and housing clusters. The goal is to significantly reduce the capital and operating costs of in-home running water and sewer in rural Alaska homes.

The Challenge project is coordinated by a steering committee made up of professionals from agencies that include the Indian Health Service, the Centers for Disease Control and Prevention, USDA-Rural Development, EPA, the Arctic Research Commission, the University of Alaska and three state programs. Funding for the project comes from the State of Alaska and EPA. Through an international solicitation begun in August 2013, the Alaska Water and Sewer Challenge called for teams to compete to create cost-effective designs for water and sewer technologies that can be constructed and operated in an arctic climate. A phased selection process has narrowed the number of teams to six. These six teams have been funded to submit written design narratives and make presentations to the project steering committee next summer. At that point, three teams will be selected to proceed with the next phase, which calls for prototype development and laboratory testing.

This novel public-private partnership combines the best that both types of organization provide. The purpose is to provide a service that is commonly in the realm of government service but in this case is very difficult to provide; by bringing in innovation from the private sector, new solutions or combinations of solutions are expected. The ultimate solutions will not become the intellectual property of the government agencies but rather will be retained by the teams that develop them, thus providing a long-term profit motive.

### Other Activities

VSW also works closely with the Arctic Research Commission, the Centers for Disease Control and Prevention, and several other agencies to coordinate an annual workshop on rural sanitation. This one-day meeting, which is held in conjunction with the Alaska Health Summit in January, typically focuses on one aspect of water and sewer development, and includes over forty professionals from throughout Alaska and other arctic nations. This year's workshop topic is wastewater treatment and disposal. Past topics have included operation and maintenance, research needs, and washeterias.

VSW also took a lead role in discussions with the U.S. State Department as projects were being selected for development during the two-year chairmanship of the Arctic Council, which will last from April 2015 – April 2017. In a project approved by the State Department, members of the Arctic Council will work together to focus on the challenge of developing *Safe and Affordable Access to Household Running Water and Sewer*. The key event of the project is a two day international symposium to be held in Anchorage, Alaska during the summer of 2016. The conference will bring together researchers, engineers, manufacturers and vendors, and health experts to discuss challenges and solutions associated with making running water and sewer in small Arctic communities safe, affordable and sustainable. A comparison of the different regulatory frameworks and approaches utilized by Arctic nations will be discussed together with problems and solutions regarding the potential impact of climate change on sanitation infrastructure in the Arctic.

Rural Alaska Homes with Indoor Water and Sewer Service

November 2015

Community	Total Homes	Served Homes
ADAK	64	64
AKHIOK	27	27
AKIACHAK	193	77
AKIAK	80	75
AKUTAN	39	39
ALAKANUK	178	178
ALATNA	17	0
ALEKNAGIK	95	95
ALLAKAKET	73	5
AMBLER	87	87
Anderson	89	85
ANGOON	142	142
ANIAK	147	147
ANVIK	49	45
ARCTIC VILL	60	0
ATKA	26	26
ATMAUTLUAK	68	5
BEAVER	29	20
BETTLES	23	0
BIRCH CREEK	24	0
BREVIG	82	82
BUCKLAND	92	87
CANTWELL	40	40
Central	53	19
CHALKYITSIK	54	5
CHEFORNAK	88	8
CHENEGA	27	27
CHEVAK	179	168
CHIGNIK	30	29
CHIGNIK LAKE	62	62
CHIGNIK LGN	37	37
Chiniak	23	23
CHISTOCHINA	24	0
Chitina	53	35
CHUATHBALUK	86	83
CIRCLE	44	0
CLARKS POINT	42	42
Coffman Cove	62	62
Cold Bay	22	19
Cooper Landing	122	110
Copper Center	125	109
CROOKED CRK	45	1
DEERING	71	71
DIOMEDE	41	0
Dry Creek	14	0
EAGLE	15	0
Eagle Village	38	11
EEK	119	62

Community	Total Homes	Served Homes
EGEGIK	89	79
EKWOK	29	29
ELIM	99	99
EMMONAK	200	191
Evansville	21	20
FALSE PASS	27	18
Ferry	8	0
FORT YUKON	236	236
GAKONA	8	8
GALENA	248	248
GAMBELL	172	170
GOLOVIN	56	47
GOODNEWS BAY	85	85
GRAYLING	56	56
GULKANA	32	32
Gustavus	260	213
Hollis	67	33
HOLY CROSS	88	88
HOONAH	208	208
HOOPER BAY	230	174
Hope	34	5
HUGHES	41	41
HUSLIA	108	107
Hyder	49	17
IGIUGIG	20	20
KACHEMAK SELO	13	13
Kake	191	164
KALSKAG	59	59
KALTAG	83	80
KARLUK	22	22
KASAAN	28	28
KASIGLUK	116	114
Kasilof	197	174
KIANA	128	128
King Salmon	121	117
KINGCOVE	163	163
KIPNUK	162	0
KIVALINA	64	1
KLAWOCK	321	321
KLUKWAN	63	63
KOBUK	28	28
KOKHANOK	45	45
KONGIGANAK	68	0
KOTLIK	129	92
KOYUK	93	90

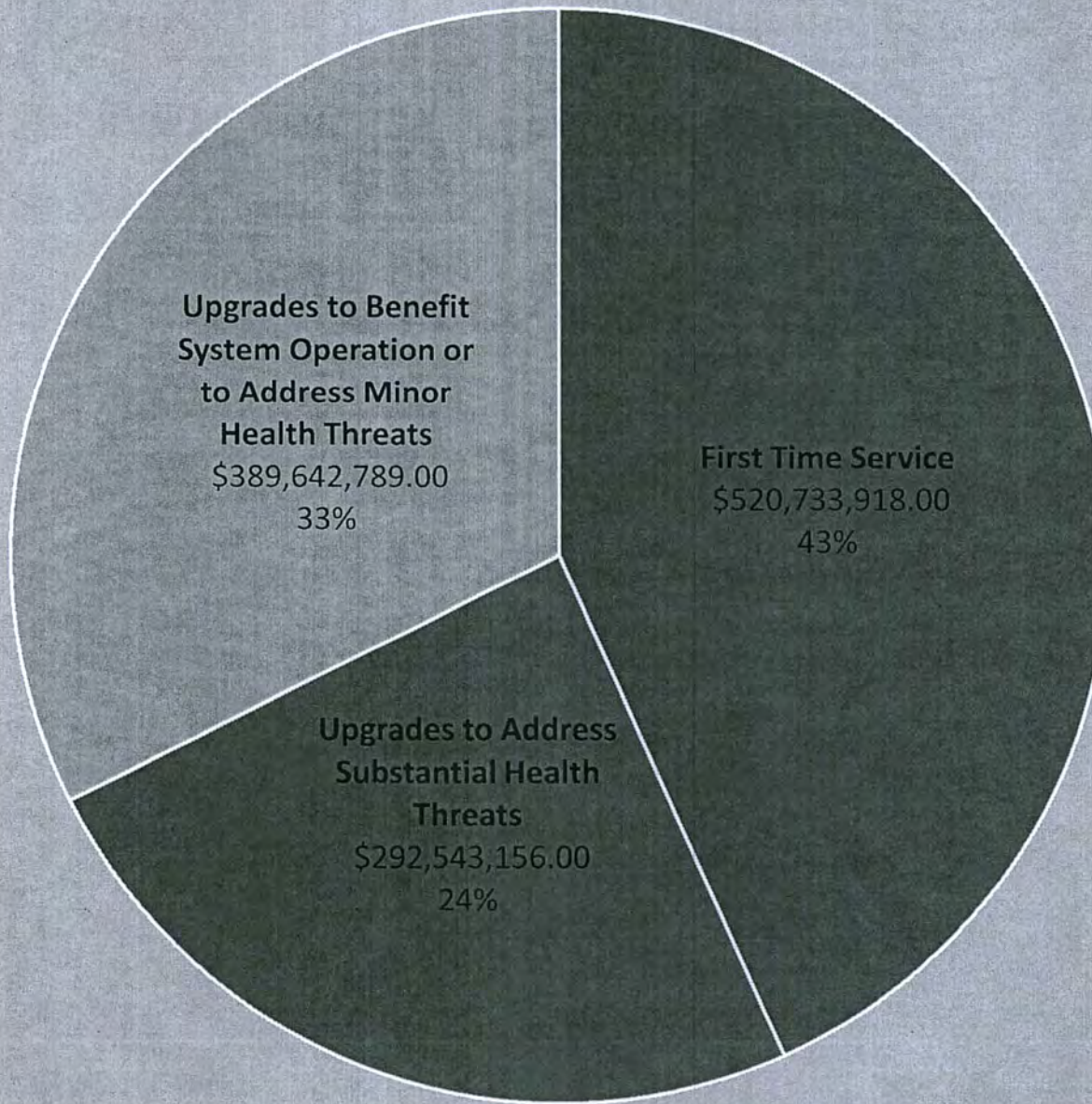
Rural Alaska Homes with Indoor Water and Sewer Service

November 2015

Community	Total Homes	Served Homes
KOYUKUK	87	51
KWETHLUK	206	195
LARSEN BAY	59	58
Lime Village	12	0
Livengood	16	6
MANOKOTAK	108	108
MARSHALL	126	114
McGrath	144	128
MEKORYUK	100	100
METLAKATLA	475	475
MINTO	101	101
MOUNTAIN VIL	181	181
Naknek	223	222
Nanwalek	62	59
NAPASKIAK	109	109
NELSON LAGOON	33	33
NENANA	169	169
NEW STUYAHOK	111	111
NEWHALEN	51	51
NEWTOK	59	3
NIGHTMUTE	51	51
Nikolaevsk	79	51
NIKOLAI	40	34
NIKOLSKI	25	25
Ninilchik	271	250
NOATAK	110	105
NONDALTON	66	66
NOORVIK	153	136
NORTHWAY	34	34
Northway Junction	11	8
Northway Village	26	8
NULATO	98	84
Nunam Iqua	51	50
NUNAPITCHUK	148	148
OLD HARBOR	92	92
OSCARVILLE	18	0
OUZINKIE	77	77
PELICAN	60	60
PERRYVILLE	51	51
PILOT POINT	33	33
PITKAS POINT	34	34
PLATINUM	26	10
Port Alexander	8	5
Port Alsworth	60	56
PORT GRAHAM	77	77
PORT LIONS	116	116
QUINHAGAK	189	161
RED DEVIL	18	13

Community	Total Homes	Served Homes
RUBY	85	37
RUSSIAN MIS	66	66
SAXMAN	99	99
SELAWIK	150	150
SELDOVIA	159	159
SHAKTOOLIK	68	68
SHISHMAREF	151	0
SHUNGNAC	77	77
Slana	99	84
ST.GEORGE	60	60
ST.MARYS	177	177
ST.MICHAEL	97	88
ST.PAUL	149	149
STEBBINS	136	0
STONY RIVER	19	4
TAKOTNA	13	1
TANACROSS	54	54
TANANA	136	136
TATITLEK	43	43
TAZLINA	65	65
TELLER	89	0
Tenakee Springs	86	50
TETLIN	43	43
Thorne Bay	250	231
Togiak	183	142
TOKSOOK BAY	140	140
Tonsina	30	30
Trapper Creek	188	158
TULUKSAK	89	4
TUNTUTULIAK	89	0
TUNUNAK	85	38
TWIN HILLS	41	41
Two Rivers	103	66
TYONEK	79	79
UNALAKLEET	198	198
VENETIE	80	5
Voznesenka	67	65
Whale Pass	26	0
WHITE MTN	81	75

# Rural Alaska Sanitation Funding Need = \$1,202,919,863



Updated March 1, 2016

**Alaska Sanitation Deficiency System  
First Time Service Projects and Upgrades to  
Address Substantial Health Threats**

Last updated 3/16/16

Project Name	Homes	Project Cost	Total Score	Health Impact of Project
LOW. KALSKAG - In-home Plumbing Phase III	11	825,000	78	First time service
KOTZEBUE- Water and Sewer Service Lines	27	1,417,500	75	Essential upgrade
GALENA - First Time Water and Sewer Facilities for Seven Homes	7	798,000	74	First time service
Fort Yukon - New Home Services	4	411,000	71	First time service
KLAWOCK - WST Replacement	132	575,000	71	Essential upgrade
Golovin - In-Home Plumbing - Upper Community CIP	19	817,000	70	First time service
TETLIN - Sewage Lagoon Upgrades	43	805,000	69	Essential upgrade
KOYUK - Lagoon Improvements	88	958,395	68	Essential upgrade
BETHEL - Water Trucks	750	266,000	68	Essential upgrade
TUNTUTULIAK - HB Collection Stations and Equipment	95	300,000	67	Essential upgrade
Kwigillingok FTH Sewage Lagoon	92	2,146,665	67	Essential upgrade
EMMONAK-Service & Plumbing for Four Homes	4	280,000	66	First time service
Kwigillingok - FTH Systems	4	325,800	66	First time service
Mt Village - 3c -Water Main Replacement (phase 3C, 2014 PER)	160	1,700,182	66	Essential upgrade
Circle Onsite Water and Sewer Systems	9	1,122,368	65	First time service
Chignik Bay - Water Treatment Plant Upgrade	30	1,550,000	65	Regulatory compliance
Klukwan Water Storage Tank	62	620,000	65	Essential upgrade
New Stuyahok community well	106	350,000	65	Essential upgrade
NOATAK - Rehabilitation of Lift Stations #1 & #3	110	1,300,000	64	Essential upgrade
BETHEL - Sewer Trucks	750	266,000	64	Essential upgrade
CHALKYITSIK - Water Self Haul w/ Small Scale Wastewater haul	51	5,793,968	63	First time service
TOKSOOK BAY - Additional Well	129	2,450,000	63	First time service
NELSON LAGOON - Sludge Pumper Truck	32	300,000	63	Essential upgrade
Buckland Treated Water Tank Replacement	88	1,229,600	63	Essential upgrade
Unalakleet Lift Station Improvements	47	800,000	62	Essential upgrade
SAXMAN - New Raw Water Source	86	1,680,520	61	Essential upgrade
Koliganek - community lift station	62	850,000	60	Essential upgrade
New Stuyahok water treatment plant	106	3,870,000	59	Essential upgrade
Brevig Mission Water and Sewer	3	450,000	57	First time service
Perryville - Water treatment plant	49	3,675,000	57	Regulatory compliance
GULKANA-Water Storage Tank Foundation	30	588,665	57	Essential upgrade
ANAKTUVUK - Truck Haul	70	321,000	57	Essential upgrade
Kwethluk - Additional Homes CIP (USDA-RD)	10	1,152,503	56	First time service
KARLUK - Water Storage Tank and Transmission Line	20	1,052,500	56	Regulatory compliance
BETHEL -Lift Station Controls	750	400,000	55	Essential upgrade
Napaskiak FTH Rehabilitation	79	1,580,000	55	Essential upgrade
Hooper Bay Wastewater Lagoon Expansion	226	3,250,000	54	First time service
Newhalen - Water treatment plant and storage tank	49	3,625,000	53	Essential upgrade

**Alaska Sanitation Deficiency System  
First Time Service Projects and Upgrades to  
Address Substantial Health Threats**

Last updated 3/16/16

Project Name	Homes	Project Cost	Total Score	Health Impact of Project
DEERING - Existing Lagoon Upgrades	68	1,055,610	51	Essential upgrade
FALSE PASS- Onsite Wastewater Systems	12	630,000	51	Essential upgrade
KIPNUK - Reservoir Recharge System	157	3,550,008	50	First time service
TUNUNAK: Existing Washeteria/WTP Upgrades	81	1,500,000	50	Regulatory compliance
DEERING - Lagoon Ocean Outfall	68	1,000,000	50	Essential upgrade
Anvik WTP/Washeteria Improvements	48	305,000	49	Essential upgrade
Chevak - Vacuum Sewer Valve Replacement Project	169	354,900	49	Essential upgrade
HUSLIA - Water and Sewer for Six Homes	6	900,000	48	First time service
Healy Lake Onsite Systems	8	2,184,676	48	First time service
KOTZEBUE- Terminal Lift Stations Replacement	411	2,457,500	48	Essential upgrade
TOGIK East Loop Water Main Upgrades (Ph. 1)	91	3,465,000	48	Essential upgrade
NOORVIK - New Sewage Lagoon	151	2,980,175	46	Essential upgrade
Akiachak Phase 1 Piped Water & Sewer - East Side Funded	101	6,800,222	45	First time service
TUNUNAK: New Water Source and drainfield	82	2,443,590	45	Regulatory compliance
Ltl Diomedea Water source development and treatment	41	2,700,000	45	Regulatory compliance
HYDABURG - New Raw Water Source	126	5,361,200	45	Essential upgrade
PORTAGE CREEK - Comm. Well & D.F.	5	813,125	44	First time service
Eek - Zone 2, Phase 2 - Water and sewer system - CIP MYLF	23	0	44	First time service
Kwigillingok Washeteria Lagoon	92	2,900,000	44	Essential upgrade
Mt Village - 3b -Water Main Replacement (phase 3b, 2014 PER)	97	1,746,950	44	Essential upgrade
KOYUK - WST Upgrades	88	350,000	44	Essential upgrade
NULATO - Lower Townsite W&S	20	6,500,745	43	First time service
Gambell -Water Plant - Boilers, Pumps, Fuel System, Piping	166	2,000,000	43	Regulatory compliance
Rampart - Sewer Lagoon Repairs	23	805,000	43	Essential upgrade
Mt Village - 3a - water main replacement	92	1,707,455	43	Essential upgrade
KLAWOCK - Water source	196	1,750,000	43	Essential upgrade
STEBBINS - Wastewater Treatment	133	7,732,000	42	First time service
GALENA - First Time Water and Sewer Facilities for Two Homes and Water	2	913,000	42	First time service
LOW. KALSKAG - New Water and Sewer Main	26	9,662,000	42	First time service
OSCARVILLE: WTP/WST	16	2,836,000	42	First time service
OSCARVILLE: Lagoon Rehabilitation	16	2,209,976	42	First time service
OSCARVILLE: Water and Sewer Mains and Services and in-home plumbing	16	3,944,089	42	First time service
HOONAH - Wastewater Treatment Plant	222	4,750,000	42	Essential upgrade
Nunapitchuk Lagoon Improvements	138	486,195	42	Essential upgrade
KALTAG - Phase 2 Water & Sewer	76	2,200,000	42	Essential upgrade
CRAIG - Water Treatment System Upgrades	101	4,000,000	42	Essential upgrade
CRAIG - Water Main Upgrades	101	3,110,000	42	Essential upgrade
Chevak Water Treatment Plant Upgrades	169	1,521,450	42	Essential upgrade

**Alaska Sanitation Deficiency System  
First Time Service Projects and Upgrades to  
Address Substantial Health Threats**

Last updated 3/16/16

Project Name	Homes	Project Cost	Total Score	Health Impact of Project
Akiachak Phase 2 Piped Water & Sewer - East Side	101	8,345,750	41	First time service
CHALKYITSIK - Separating Toilets (Low Water Use Phase 1)	10	1,653,000	41	First time service
ELIM - Water Storage Tank	94	2,099,998	41	Essential upgrade
UPPER KALSKAG - Force Main Repair	33	800,000	41	Essential upgrade
DEERING - Vacuum Plant Upgrade	68	750,000	41	Essential upgrade
ALAKANUK - Serve Outlying Homes	13	1,250,000	40	First time service
WHITE MTN - W/S Svc. for 4 Homes	4	680,000	40	First time service
TUNUNAK: Replace Water Storage Tank for Pipes	66	845,296	40	Essential upgrade
KOYUK - New Water Treatment Plant	88	3,505,320	40	Essential upgrade
Russian Mission - Sewage Lagoons	60	3,250,000	40	Essential upgrade
Bethel - Lagoon Expansion CIP	750	4,038,332	40	Essential upgrade
Circle WTP Rehabilitation & New WST	33	600,000	40	Essential upgrade
STEBBINS - Water Storage Tank	133	3,112,200	40	Essential upgrade
Platinum - N. End Water/Sewer Expansion	6	755,000	39	First time service
Teller - First Service Project	89	27,559,700	39	First time service
KOTLIK - W&S Islands Sections Ph2	29	5,420,000	39	First time service
KOTLIK - W&S Island Sections Ph1	29	4,530,000	39	First time service
NOORVIK - Utilidor Replacement	28	2,139,256	39	Essential upgrade
Crooked Creek - Lagoon	36	1,900,000	38	First time service
RUBY - W&S Haul to 28 Homes	28	2,530,014	38	First time service
Arctic Village Piped Water and Sewer	59	10,462,905	38	First time service
Mt Village- Water System Treatment Upgrades	162	3,000,000	38	Regulatory compliance
KIANA - Sewage Lagoon Relocation	120	4,880,000	38	Essential upgrade
MANOKOTAK - OLD VILLAGE Water Main Repai	64	1,831,800	38	Essential upgrade
KOYUK - New Water Source	88	911,000	38	Essential upgrade
Tazlina - Washeteria	36	980,000	38	Essential upgrade
Atmaultuak - Piped Water and Sewer Phase 2	63	4,650,367	37	First time service
PITKA'S POINT - Piped Water and Sewer	8	1,128,914	37	First time service
SHAGELUK - Community Piped Water and Sewer System	58	10,110,000	37	First time service
STEBBINS - South Lp W/S Service	67	12,599,460	37	First time service
STEBBINS - North Lp W/S Service	58	9,708,488	37	First time service
STEBBINS - East Lp W/S Service	8	3,442,688	37	First time service
STEBBINS - RW Intake and Trans Line	133	10,216,000	37	First time service
Eek - Zone 3, Phase 1 - Water and sewer system	18	5,570,020	37	First time service
NAPAKIAK - Waterplant Consolidation	98	1,100,000	37	Essential upgrade
Grayling - Sewer Improvements	55	1,240,000	37	Essential upgrade
KOBUK - Phase 4 - Water and Sewer Service Line Repairs	4	273,544	37	Essential upgrade
Shaktoolik - WST replacement	67	2,600,000	37	Essential upgrade

**Alaska Sanitation Deficiency System  
First Time Service Projects and Upgrades to  
Address Substantial Health Threats**

Last updated 3/16/16

Project Name	Homes	Project Cost	Total Score	Health Impact of Project
Shaktoolik - water supply improvements	67	1,845,631	37	Essential upgrade
KIVALINA - First Service Project	31	24,500,000	36	First time service
Marshall W&S Extentions	3	1,541,322	36	First time service
DEERING - Distribution AboveGrnd Seasonal	68	1,988,514	36	Essential upgrade
NIKOLSKI-WTP & Sewage Disposal Upgrades	24	2,000,000	36	Essential upgrade
NENANA - WTP renovation CIP	123	4,890,000	36	Essential upgrade
ALATNA - First Service Project	17	12,460,658	35	First time service
KONGIGANAK - Full Pipe	89	21,760,000	35	First time service
Koyukuk - Individual Wells	15	1,834,245	35	First time service
Koyukuk Community Sewer System	50	5,790,000	35	First time service
Lime Village Wells and Septics	4	2,277,000	35	First time service
RAMPART - Piped Water and Sewer Facilities	23	8,095,000	35	First time service
Crooked Creek - W/S Lower Village	16	7,092,008	35	First time service
HOONAH - Wtr Distro Replacement & Extension	19	1,345,000	35	First time service
Little Diomed piped water and sewer design and construction	41	3,990,000	35	Essential upgrade
OLD HARBOR - Water Distribution Replacement	76	2,161,250	35	Essential upgrade
BIRCH CREEK - First Service Project	18	19,167,734	34	First time service
GAMBELL -Extend Sewer to Old Village	43	5,953,500	34	First time service
GAMBELL -Extend Water to Old Village	43	4,780,000	34	First time service
TULUKSAK - Piped Water and Sewer	83	22,500,000	34	First time service
TUNUNAK: Piped Sewer	48	11,340,000	34	First time service
TUNUNAK: Piped Water	50	14,580,000	34	First time service
VENETIE: First Time W&S Service	76	13,958,000	34	First time service
WALES - Piped Water/Sewer HUD	58	11,316,343	34	First time service
Platinum - Water Treatment Plant & Water Tank	19	1,423,000	34	Regulatory compliance
ST GEORGE - Replace WST	56	659,085	34	Essential upgrade
Cheformak - Washeteria, WST, Watering Points (VSW CIP)	80	0	33	First time service
ALLAKAKET - Water & Sewer Service - Lower Village	48	11,688,000	33	First time service
ALLAKAKET - Water & Sewer Service - Upper Village	20	6,004,000	33	First time service
Crooked Creek - Wells and Septics	12	2,783,006	33	First time service
KIPNUK - Piped W/S General Estimate	157	34,000,000	33	First time service
Ruby - Individual Water & Sewer Services	11	2,184,601	33	First time service
Stevens Village Piped Water and Sewer	41	14,064,751	33	First time service
ADAK Water Treatment Plant & Treated Water Tank	22	5,832,600	33	Regulatory compliance
OUZINKIE - Water Main Replacement	76	2,100,000	33	Essential upgrade
Atmautluak - Piped Water and Sewer Phase 3	34	9,065,588	32	First time service
Atmautluak - Piped Water and Sewer Phase 4	6	4,927,145	32	First time service
Atmautluak - Piped Water and Sewer Phase 5	10	2,754,903	32	First time service

**Alaska Sanitation Deficiency System  
First Time Service Projects and Upgrades to  
Address Substantial Health Threats**

Last updated 3/16/16

Project Name	Homes	Project Cost	Total Score	Health Impact of Project
Atmautluak - Piped Water and Sewer Phase 6	13	4,205,358	32	First time service
Atmautluak - Piped Water and Sewer Phase 1	63	5,626,031	32	First time service
TAKOTNA: Wells and Septics	5	1,640,000	32	First time service
Grayling - Dist System Replacement Ph 1	55	1,517,000	32	Essential upgrade
Chignik Lagoon - WTP Upgrade	32	950,000	32	Essential upgrade
Eagle - First Service Project	15	6,670,623	31	First time service
Nuiqsut Water and Sewer	15	5,004,510	31	First time service
AMBLER - Services for 9 New Homes	9	0	31	First time service
Nunam Iqua - WTP Upgrade	39	1,046,100	31	Essential upgrade
KOBUK - Phase 3 - WTP Process Upgrades	33	670,326	31	Essential upgrade
LARSEN BAY - Raw Water Source Upgrade	54	1,500,000	31	Essential upgrade
Circle - Community Water/Sewer	17	4,617,990	29	First time service
Perryville - Dam	49	2,250,000	29	Essential upgrade
Kokhanok- Water treatment plant	41	3,904,500	28	Regulatory compliance
KAKE - Water System Repair	20	1,440,000	27	First time service
Slana - onsite wells & septic systems	0	1,786,500	26	First time service
Thorne Bay - WTP & WWTP improvements	0	0	25	Regulatory compliance
SHISHMAREF - Flush and Haul	10	1,809,350	25	Essential upgrade
Tanacross Sewer Improvements	42	800,000	25	Essential upgrade
GALENA: Louden Loop Water Service	14	1,078,000	24	First time service
RAMPART - Water Storage Tank	23	945,000	23	First time service
AMBLER - South Loop Extension	0	1,370,855	23	First time service
ADAK Sewage Lagoon	22	4,250,000	23	Essential upgrade
Healy Waterplant Washeteria Repair.	8	500,000	23	Essential upgrade
Thorne Bay - major dist syst loop	0	4,027,660	22	First time service
ST. MARY'S - Andreafsky Loop Water Main Upgrade	35	2,003,026	21	Essential upgrade
Elfin Cove - WTP and Service Lines	0	6,532,000	19	Regulatory compliance
Chignik Bay Water Source Imp.	30	1,698,500	19	Essential upgrade
Newhalen - Phase 2 sewer collection	49	4,080,000	19	Essential upgrade
Gustavus: Septage Disposal Area	0	0	19	Essential upgrade
CHALKYITSIK - Wtr & Swr Service to Community Building	0	266,000	18	First time service
NEWTOK - Metarvik Watering Point, On-Sites	0	2,750,000	18	First time service
Nikolaevsk - water main extension	0	3,379,210	18	First time service
Aleknagik-North Shore West Area Phase 1 Water CIP MYL	23	4,027,500	18	Essential upgrade
Aleknagik Phase 2 Sewer Project	21	5,497,125	18	Essential upgrade
SCAMMON BAY: Sewage Lagoon Expansion	88	5,341,320	18	Essential upgrade
NIGHTMUTE - Lift Station/Forcemain	47	2,270,000	17	Regulatory compliance
NIGHTMUTE - Sewage Lagoon Upgrade	47	2,467,500	17	Regulatory compliance

**Alaska Sanitation Deficiency System  
First Time Service Projects and Upgrades to  
Address Substantial Health Threats**

Last updated 3/16/16

Project Name	Homes	Project Cost	Total Score	Health Impact of Project
TETLIN - Water and Sewer Haul	19	4,214,000	17	Essential upgrade
South Naknek - Sewer lagoon project	52	4,440,000	17	Essential upgrade
EKWOK: Sewage lagoon improvements	25	800,000	17	Essential upgrade
TUNTUTULIAK - Flush Tank and Haul	0	1,437,346	16	First time service
Crooked Creek - Piped W/S Middle Vil	12	6,075,900	15	First time service
Unalakleet New Water Source	168	15,007,500	15	Essential upgrade
AMBLER - South Loop Water Replacement	30	2,850,801	15	Essential upgrade
TANANA - Connect 5 Homes to Grid	0	1,943,779	14	First time service
Pelican - Septic Tank Rehab	0	150,000	14	Regulatory compliance
KARLUK - Water Treatment Plant	20	1,500,000	14	Essential upgrade
AMBLER - South Loop Sewer Replacement	22	2,293,803	14	Essential upgrade
AMBLER - North Loop Sewer Replacement	47	3,463,869	14	Essential upgrade
AMBLER - North Loop Water Replacement	39	3,583,402	14	Essential upgrade
YAKUTAT - Water Main Replacement	8	500,000	14	Essential upgrade
Koliganek - water treatment plant	62	4,357,236	13	Essential upgrade
NIGHTMUTE - Washeteria	47	2,705,250	13	Essential upgrade
Point Lay Water Source Protection	54	1,969,800	13	Essential upgrade
Adak Lift Station Upgrades & Closures	22	955,500	11	Essential upgrade
Chignik Lake - Water Treatment Plant	54	3,040,000	11	Essential upgrade
Chignik Lake - Ph III Sewer Improvement	12	1,652,000	11	Essential upgrade
NONDALTON: Sewer Collection	65	3,196,863	11	Essential upgrade
EKWOK: Piped Sewer Expansion	7	1,510,000	11	Essential upgrade
Preliminary Engineering Reports-phase 2	0	472,566	10	First time service
NOATAK - West Water Loop Replacement	56	2,275,000	10	Essential upgrade
ST PAUL -OUTFALL	0	200,000	10	Essential upgrade
MCGRATH - Piped Water & Sewer	0	4,000,000	9	Essential upgrade
TOGIAK West Loop #1 W/S Upgrade (Ph. 2)	82	4,469,804	8	Essential upgrade
TOGIAK - Bayview Sewage Lagoon	31	2,303,581	8	Essential upgrade
Coffman Cove infiltration gallery & lift station	0	1,000,000	7	Essential upgrade
Seldovia Sewer Line Replacement	24	750,002	7	Essential upgrade
Seldovia Septage Lagoon	31	500,000	7	Essential upgrade
Seldovia Slough Sewer Phase 1	178	619,605	7	Essential upgrade
Kachemak Selo Water Treatment Plant	0	350,000	5	Regulatory compliance
ATQASUK - W/S Holding Tanks	0	935,000	4	Essential upgrade
Pelican - Mussel Heights Sewer	0	1,489,300	4	Essential upgrade
ANGOON - Water Source Upgrade	128	7,050,000	3	Essential upgrade
ANAKTUVUK - W/S Holding Tanks	0	825,000	3	Essential upgrade
Nikolaevsk - WST insulation	0	569,600	3	Essential upgrade

**Alaska Sanitation Deficiency System  
 First Time Service Projects and Upgrades to  
 Address Substantial Health Threats**

Last updated 3/16/16

Project Name	Homes	Project Cost	Total Score	Health Impact of Project
NIK-Water Treatment Automation Improvement	0	398,000	3	Essential upgrade
ST PAUL - CRITICAL NEEDS	0	558,338	2	Essential upgrade
ST PAUL - OLD TOWN WATER MAINS	0	573,550	2	Essential upgrade
ST PAUL - WATER WELLS & WATER TANK	0	1,046,854	2	Essential upgrade
ST PAUL - ELLERMAN HTS SEWR PH II	0	481,882	2	Essential upgrade
GAMBELL - Horizontal Well and Line	141	620,000	1	Essential upgrade
Kwigillingok House Plumbing Upgrades-HUD Homes	20	1,419,491	1	Essential upgrade
Copper V. Drinking Water Haul Truck	0	150,000	1	Essential upgrade
	<b>Total</b>	813,277,074		

**Alaska Sanitation Deficiency System  
Upgrades to Benefit System Operation or to  
Address Minor Health Threats**

Last updated 3/16/16

Project Name	Homes	Project Cost
KONGIGANAK: Additional Watering Point / Laundry and Lagoon Upgrades	89	1,850,000
PORT GRAHAM - Sludge Lagoon Facility	76	1,000,000
PORT GRAHAM - Water Distribution Upgrade	76	45,600
BARROW - Truck Haul	760	321,000
Ruby - SW Landfill Upgrades	60	250,000
TULUKSAK - Connect Wells and RW Transmission Main	83	837,500
ATKA - Solid Waste Permit and Burn Box	26	160,000
KLAWOCK - WW system upgrades	189	250,000
STEVENS VILLAGE Water storage Tank for piped system	39	1,078,400
FORT YUKON - Solid Waste Management Plan	196	50,000
TANANA: Washeteria Shower Reconstruction	35	100,000
POINT LAY - Truck Haul	54	321,000
PORT GRAHAM - Solid Waste Facility	76	662,000
CHENEGA BAY - Sludge Lagoon	25	790,000
Chignik Bay - Water distribution system improvements	30	250,000
STEBBINS - Washeteria Expansion	133	2,000,000
KIVALINA - Washeteria Upgrades	47	1,800,000
Atmautluak - Lift Station Replacement	63	352,115
Atmautluak - Washeteria & Water Treatment System Improvements	63	1,396,500
BEAVER - Water Plant and Utilidor Upgrades	28	300,000
NENANA - Transfer Station	134	500,000
WAINWRIGHT - Solid Waste	171	870,000
Kokhanok sludge pumper truck	38	200,000
Pilot Point- Sewer Improvements	31	591,350
Chignik Lagoon - Water and Sewer	32	80,000
SAND POINT - Lift Station Upgrades	75	600,000
PORT GRAHAM - Outfall Consolidation	76	2,710,250
NANWALEK - Solid Waste Facility	56	535,000
CRAIG - Water Treatment & Energy Component Upgrades	101	575,000
CHALKYITSIK - WTP & WST Upgrades	52	992,865
NUNAPITCHUK - Solid Waste Burn Bar.	138	78,850
Quinhagak - Solid Waste Dumpsters	206	150,000
Bethel - Lagoon Truck Haul Dump Area (State Funds)	750	827,293
HYDABURG - New Water Storage Tanks	126	1,265,000
NOORVIK - Sewage Lagoon Closure	151	470,864
PILOT STATION - Solid Waste	132	660,000
ST. MICHAEL - WST Rehabilitation	95	1,250,000
KAKE - Solid Waste	191	600,000

**Alaska Sanitation Deficiency System  
Upgrades to Benefit System Operation or to  
Address Minor Health Threats**

Last updated 3/16/16

Project Name	Homes	Project Cost
KIANA - Landfill Upgrades	120	250,000
CHEFORNAK - Close Sewage Pit	82	200,000
ELIM - Close Old Solid Waste Site	94	85,000
NOATAK - Upgrade Existing Landfill	108	309,600
NOATAK - Sludge Pumper Truck	108	225,000
STEBBINS - Solid Waste Site Improvements	133	100,000
Nikolai Lift Station Enclosure	37	575,000
TULUKSAK - New Washeteria/WTP/WST	83	3,928,475
CHALKYITSIK - Landfill Closure	51	88,549
MEKORYUK Sewer, Washeteria Improvements	97	795,000
NEWTOK - WTP improvements	80	650,000
NEWTOK - Close Existing Dump	80	134,377
Klukwan Sewage Sys. Upgrade	62	771,342
KOTZEBUE- Vortac Lake Impoundment Improvements	411	1,800,000
NORTHWAY/ BACKUP WELL	34	250,000
ALAKANUK - Solid Waste Improvements	139	180,000
KONGIGANAK - Solid Waste	89	200,000
KOYUK - Sewer Collection Imp.	88	700,000
AKIACHAK - Solid Waste	179	1,045,000
SHAGELUK - Landfill Upgrades	58	400,000
SHISHMAREF - Lagoon Exp. & HB Haul	141	2,475,000
ST. MARY'S - Landfill Upgrade	185	1,508,571
ANIAK - Solid Waste	129	1,080,000
AMBLER - Raw Water Transmission Line	69	370,782
YAKUTAT - Well and Pumphouse Upgrade	89	175,000
Brevig Mission Water Transmission Main	80	850,000
Kwigillingok Water Tank Repair	92	300,000
TUNTUTULIAK: Landfill Upgrades	105	150,000
Mt Village - Solid Waste	162	971,383
KOBUK - Phase 2 - Water Source, Fuel Line, Lift Station Modifications	33	686,476
KLAWOCK - Water Meters	196	294,000
RUBY - Community Sludge Disposal	60	1,525,000
Grayling Solid Waste Improvements	55	95,000
Nunam Iqua WST	39	780,000
KASAAN - Sewer Rehabilitation	28	462,500
SAXMAN - Sewage Outfall Elimination	86	1,405,000
TETLIN - SW Landfill Improvements	43	400,000
HOLY CROSS: Primary Community Well	83	520,500

**Alaska Sanitation Deficiency System  
Upgrades to Benefit System Operation or to  
Address Minor Health Threats**

Last updated 3/16/16

Project Name	Homes	Project Cost
HOLY CROSS: Water and Sewer System Upgrades	83	811,100
KAKE - Primary WW Treatment Expansion	191	1,000,000
KIANA - Manganese Removal	120	600,000
MANOKOTAK - OLD VILLAGE Sewer Main Repai	64	363,000
Nunam Iqua - Water/Sewer Generator	39	250,000
OSCARVILLE: Community Well Improvements	16	1,135,000
Chignik Lake - Solid Waste Improvements	54	60,000
Chignik Lake - Water Distribution Booster Station	54	300,000
CRAIG - Sewer Vacuum Truck	101	150,000
Dillingham solid waste site	199	500,000
KALTAG-Washeteria Upgrades	76	50,000
KALTAG - Solid Waste Improvements	76	160,000
KOBUK - Phase 5 - Sewer Manhole Realignment & Drainfield Inpection/Testing	33	111,935
Savoonga - Water Storage Tank	164	1,305,000
Selawik - New Solid Waste Site	144	1,452,500
KAKTOVIK - Truck Haul	96	321,000
NUIQSUT - Truck Haul	104	321,000
POINT HOPE - Truck Haul	209	321,000
ANGOON Front Street W/S Replacement	129	1,502,000
NONDALTON - Lift Station Upgrades	65	500,000
Nikolai Water and Sewer	2	530,000
ALLAKAKET - Landfill Fencing	67	500,000
SHISHMAREF - Solid Waste Site Upgra	140	1,303,000
HUGHES - Drainfield Phase II	39	862,290
Kwethluk - Close abandon lagoons	172	951,136
Unalakleet Water Plant Upgrades	131	818,000
ATQASUK - Solid Waste	64	594,500
Mountain Village - water storage phase 2	152	575,000
Mt Village - WST Upgrades	160	1,034,819
Mt Village - Manhole Replacement	160	587,000
Mt Village - Sewer Service Upgrades	160	989,688
NONDALTON - Back Up Community Well	65	575,395
Grayling - Dist System Replacement Ph 2	31	525,000
TULUKSAK - Solid Waste	92	701,946
VENETIE: Landfill Improvements	76	650,000
AKHIOK - Water Source Improvements	27	525,000
OLD HARBOR - Solid Waste Facility	93	770,000
KLUKWAN - Solid Waste	62	485,000

**Alaska Sanitation Deficiency System  
Upgrades to Benefit System Operation or to  
Address Minor Health Threats**

Last updated 3/16/16

Project Name	Homes	Project Cost
HYDABURG - Solid Waste Facility	126	1,090,000
KOTZEBUE- Swan Lake Loop Water Main Replacement	106	2,970,000
HEALY LAKE - Solid Waste	8	164,736
EMMONAK-Vacuum Pumps Upgrade/Replacement	158	475,000
GAMBELL - Water Conservation	140	280,000
Mt Village -- Replace Middle Pump House Buidling	152	1,200,000
HYDABURG - Sewage Treatment	126	1,100,000
NOORVIK - Landfill Upgrades	151	850,000
EKWOK - Lift Station Upgrades CIP	24	300,000
Chevak - Sewage Lagoon	169	3,500,000
ANIAK - Lagoon Expansion	121	4,800,000
Selawik - New Intake & Trans. Line	144	870,602
TATITLEK - Outfall Rehabilitation	40	250,000
TATITLEK - Intake Gallery Restoration	40	171,000
HOLY CROSS: Water Treatment Plant Rehab	83	850,000
KOTZEBUE- Front Loop Expansion	411	5,500,000
KIVALINA - New WST and Lagoon Expansion	47	2,994,000
NORTHWAY - Solid Waste	34	608,550
Stevens Village - Water Treatment Plant	41	1,984,500
METLAKATLA - Solid Waste	454	2,908,500
MEKORYUK - Solid Waste Site	97	938,632
HOLY CROSS: Solid Waste Site Rehabilitation	68	1,077,286
AMBLER - New Solid Waste Site	82	1,262,356
BUCKLAND - Solid Waste Upgrade	88	1,305,000
HUGHES - Landfill Closure	37	550,000
LOW. KALSKAG - Solid Waste Facility	86	1,405,000
ST GEORGE - Choochkie Hts	56	500,000
KASIGLUK Solid Waste	105	1,000,911
Kwigillingok Solid Waste Landfill Upgrades	92	925,000
KOBUK - Phase 6 - Solid Waste Improvements	33	401,285
CHENEGA BAY - Solid Waste Improvements	25	545,000
KASAAN - Water Distribution Replacement	25	1,096,375
Nikolai - Solid Waste	37	500,000
OUZINKIE - Solid Waste	76	1,009,574
Pilot Point Buried Sewer collection replacement	31	1,192,599
SAND POINT - Old Town W/S	41	1,600,000
SAXMAN - Water Distribution Replacement	38	1,014,500
Chignik Lagoon - Solid Waste	31	500,000

**Alaska Sanitation Deficiency System  
Upgrades to Benefit System Operation or to  
Address Minor Health Threats**

Last updated 3/16/16

Project Name	Homes	Project Cost
Chuathbaluk - solid waste	40	469,300
MANOKOTAK - SW Building & Equipment	64	1,090,401
TELLER - Solid Waste	89	1,162,000
TYONEK - Solid Waste Facility	76	870,000
Russian Mission - Water and sewer system upgrades	60	915,000
WALES - Solid Waste	58	580,000
Golovin - Landfill Improvements	41	450,000
Gulkana Open Dump Assessment	30	500,000
KOTLIK - New Solid Waste Site	120	1,504,471
LARSEN BAY - Solid Waste Facility	55	750,000
South Naknek - Solid waste facility	52	850,000
KING COVE - Landfill Incinerator	125	1,248,947
NOATAK - New Landfill	108	2,715,000
PITKA'S POINT - Solid Waste Improvements	29	624,455
POINT HOPE - Solid Waste	209	3,065,000
IGIUGIG - sewer lagoon improvements	19	250,000
NULATO - Water Storage Tank	70	1,488,404
ANAKTUVUK - Solid Waste	70	1,179,800
Kwethluk - Solid Waste	196	4,030,000
SHUNGNAK - New Landfill & Closeout Old LF	75	1,886,618
SLEETMUTE - Solid Waste	25	410,000
TYONEK - Water Main and Service Replacement	27	718,750
NANWALEK - Sludge Lagoon Facility	56	1,090,000
KARLUK - Sewer Lift Station	20	795,000
YAKUTAT - Lift Station Replacement	94	2,430,000
TAKOTNA - Pumper Unit	2	50,000
GAMBELL - Landfill	166	2,860,000
Kwigillingok Closure of Existing Solid Waste Site	92	1,800,000
NIGHTMUTE - Solid Waste	47	1,051,000
Port Heiden - solid waste	30	387,000
TYONEK - Sludge Lagoon Upgrade	76	995,000
ELIM - Water Treatment/Intake Imp.	94	1,300,000
HYDABURG - Water Distribution Replacement	84	1,674,000
KASAAN - Ocean Outfall Facility	28	575,000
OUZINKIE - Water Transmission Line	76	1,260,000
Pilot Station Water & Sewer Replacement	51	1,038,000
SAXMAN - Settling/Septic Tank Addition	86	1,150,000
ST.MICHAEL - New Solid Waste Site	95	1,400,000

**Alaska Sanitation Deficiency System  
Upgrades to Benefit System Operation or to  
Address Minor Health Threats**

Last updated 3/16/16

Project Name	Homes	Project Cost
Akiak - Solid Waste	79	1,330,000
Grayling - Washeteria	55	2,217,600
KIPNUK - Solid Waste Landfill	157	3,177,583
TATITLEK - Solid Waste Facility	40	900,000
NAPASKIAK (PKA) - Solid Waste Impvts	105	1,218,081
TANACROSS - Solid Waste Improvements	42	500,000
Gulkana River Intake Improvement	30	500,000
NONDALTON - Water Storage Tank and Concrete Foundation	65	1,020,000
EAGLE - Solid Waste Improvements	15	200,000
TATITLEK - WTP Polymer System	40	525,000
ELIM - Sewer Treatment Imp.	94	2,665,000
ANGOON Landfill Imp.	129	1,475,000
TUNUNAK: Solid Waste	66	480,000
Eek - Honey bucket lagoon closure	98	2,153,827
Goodnews Bay - Sewer lagoon erosion control	80	1,450,000
Russian Mission - Upper circ loop	27	762,500
Russian Mission - Water/Sewer Replacement	37	1,746,250
Russian Mission - New WST	60	1,167,500
BETTLES (EVANSVILLE) - Landfill expansion	21	500,000
PLATINUM - Pumper Truck Storage	19	430,000
TANANA - Sewage Lagoon Upgrade	69	1,100,000
CANTWELL - Solid Waste Site	16	487,742
PORTAGE CREEK - Solid Waste	5	205,000
ANGOON W/S Improvements	129	2,118,000
MEKORYUK Piped Water & Sewer	97	21,666,000
OSCARVILLE: Community Solid Waste Site	16	750,000
Stony River - Solid Waste	16	980,000
Pilot Point Community well and Water Treatment Plant	31	2,034,043
Pilot Point Piped Water Distribution	31	2,398,405
UPPER KALSKAG - Solid Waste	58	1,330,000
Nunam Iqua- Solid Waste	39	1,612,000
TOKSOOK BAY - Landfill	128	2,962,388
LARSEN BAY - Gravity Sewer Main	32	1,838,604
SCAMMON BAY - Solid Waste Site	88	2,945,979
KAKTOVIK - Solid Waste	21	885,000
NUIQSUT - Solid Waste	104	2,895,000
PELICAN - Solid Waste	12	240,500
POINT LAY - Solid Waste	53	1,695,000

**Alaska Sanitation Deficiency System  
Upgrades to Benefit System Operation or to  
Address Minor Health Threats**

Last updated 3/16/16

Project Name	Homes	Project Cost
Russian Mission - Solid Waste Site	60	3,700,000
CRAIG - Sewer Collecton System Upgrades	101	3,688,000
AKHIOK - Solid Waste	27	1,341,670
KIVALINA - Expand Solid Waste Site	47	1,793,655
MEKORYUK Sewage System Upgrades	15	1,285,000
Twin Hills - Solid Waste	39	2,300,000
KOTZEBUE- Water Treatment Plant Replacement	411	15,000,000
ALATNA - Solid Waste Landfill	17	955,111
Goodnews Bay - Solid waste site	80	2,150,000
KARLUK - Solid Waste Facility	20	660,000
KOYUK - New Solid Waste Site	88	2,309,400
Lime Village Solid Waste Improvements	11	785,000
RAMPART - Solid Waste	15	770,116
BIRCH CREEK - Solid Waste Site	18	810,989
Koliganek - solid waste site	62	1,884,265
NANWALEK - Water Distro Replace - Phase 1	26	1,421,975
NANWALEK - Water Distro Replacement - Phase II	30	1,678,500
AKUTAN- Water & Sewer Distribution Main Replacement	39	3,913,000
KASAAN - New Raw Water Source	29	2,120,000
Crooked Creek - Landfill	36	1,462,500
Kokhanok - Solid waste	41	2,250,000
PORT LIONS - Water Main Replacement	86	2,775,000
Ugashik - Solid waste	15	930,000
Adak Water & Sewer Pipe Replacement	22	5,443,750
LARSEN BAY - Water Distribution Replacement	19	968,950
NONDALTON - Water Distribution System Upgrades	65	3,375,000
SCAMMON BAY - Water Distribution System Replacement Phase 1	34	2,850,000
SCAMMON BAY - Water Distribution System Replacement Phase 2	54	2,355,000
NIKOLSKI - Solid Waste	13	411,430
ELIM - East Loop Water and Sewer	38	2,721,600
AKHIOK - Water Distribution Mains	27	1,325,000
AKHIOK - Sewer Mains	27	1,575,000
Marshall W&S Pipe Replacement	18	1,978,621
Twin Hills water and sewer system improvements	39	7,895,000
GALENA - Backup Ground Water Source	198	150,000
McGrath Solid Waste Assistance Prg	0	103,911
McGrath - Sewage Lagoon Upgrades	0	1,060,000
KARLUK - Water Main Replacement	20	1,014,000

**Alaska Sanitation Deficiency System  
Upgrades to Benefit System Operation or to  
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Last updated 3/16/16

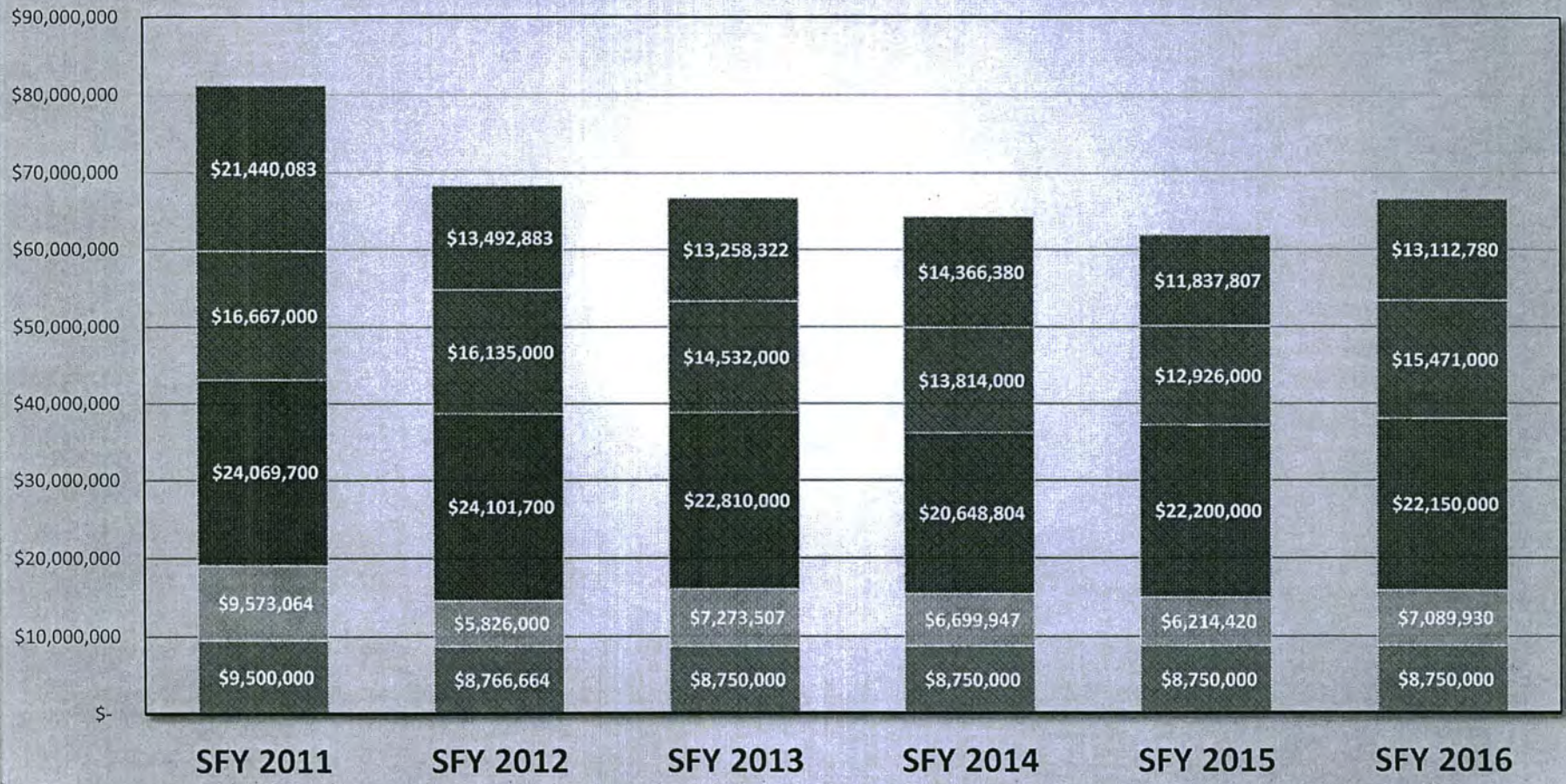
Project Name	Homes	Project Cost
TOGIAK West Loop #2 W/S Upgrade (Ph.3)	66	5,514,050
TOGIAK East Loop Sewer Facilities Upgrades (Ph. 1)	187	5,006,804
EMMONAK-Water Treatment Capacity Project	158	8,928,640
GAMBELL -2.2 MG Water Storage Tank	141	11,550,000
Koliganek - sewer lagoon and wastewater improvements	61	3,265,163
Port Heiden - Washeteria	30	1,745,655
ATKA - Upgrade Creek Intake	26	164,000
Seldovia Slough Sewer Phase 2	178	1,037,012
Crooked Creek - Sewer Vac Truck	36	1,982,000
NELSON LAGOON - Water Storage Tank	32	1,088,000
Atkasuk Wastewater Treatment Expansion	0	6,000,000
KAKTOVIK - W/S Holding Tanks	0	275,000
POINT HOPE - W/S Holding Tanks	0	495,000
POINT LAY - W/S Holding Tanks	0	1,265,000
Nikolaevsk - groundwater investigation	0	231,115
Nikolaevsk - watering point & washeteria	0	932,652
WAINWRIGHT - Truck Haul	0	321,000
ST GEORGE - WW Main Replacement	43	770,000
ST GEORGE - Water Distribution System	56	2,186,250
ST GEORGE - Waterfront St Intersect	56	600,000
	<b>Total</b>	<b>389,642,789</b>

# State of Alaska

## Funding for Rural Water and Sewer Improvements

### SFY2011 - 2016

(all sources)



Updated March 1, 2016

State
  EPA-IG
  USDA-RD
  IHS
  EPA Tribal

# Water Innovations for Healthy Arctic Homes Conference

## September 18 – 22, 2016

### Anchorage, Alaska

#### Summary

The U.S. State Department has included a proposal submitted by the State of Alaska's Department of Environmental Conservation (ADEC) to be carried out in conjunction with the U.S. chairmanship of the Arctic Council (April, 2015 – April, 2017). ADEC in coordination with an interagency planning group is organizing an international conference to address the challenges associated with providing *Safe and Affordable Access to Household Running Water and Sewer in remote Arctic communities* in order to explore avenues for improvement. This conference will be taking place from September 18 – 22, 2016 in Anchorage, and has been named the **Water Innovations for Healthy Arctic Homes (WIHAH)** Conference.

The conference is jointly funded by the Alaska Department of Environmental Conservation, the U.S. Environmental Protection Agency, the U.S. Department of Agriculture – Rural Development Program, the U.S. Arctic Research Commission, the Centers for Disease Control & Prevention (CDC), and the U.S. State Department.

#### Background

In 2015, the U.S. State Department called for project proposals for the current U.S. Chairmanship of the Arctic Council. ADEC proposed a project where member countries and organizations would work together to focus on the challenge of developing *Safe and Affordable Access to Household Running Water and Sewer in remote Arctic communities*. The conference is included in the Sustainable Development Working Group (SDWG) work plan for 2015-2017 and is being tracked by the Arctic Human Health Experts Group, an multinational advisory group to the SDWG. This initiative arises from the recognition that persons living without in-home running water and sewer services suffer higher rates of infectious diseases. Improved access to sanitation services could reduce many of the health disparities suffered by rural Arctic residents.

Remote locations, harsh weather, and high transportation and fuel costs make building and operating community wide (centralized) water and sewer systems in the Arctic extremely expensive. Construction costs often exceed available government funding and cash strapped rural communities are hard pressed to keep centralized systems running. Unless alternative individual household (decentralized) technologies are implemented, many Arctic and subArctic residents may never have indoor plumbing. This situation is not isolated to Alaska. In Canada, Russia and Greenland there are an estimated 1.7 million homes that could potentially benefit from alternative sanitation technologies.

Each Arctic nation and remote community contends with the challenges of providing water and sewer service to residents in a different way. Regulations vary considerably among nations, and in some countries allowances are made in order to make running water and sewer more feasible. Other countries have elected to relocate homes or subsidize the cost of operating sanitation systems. Regardless of how these challenges have been approached, there is a need for the international Arctic community to work together on technologies that will cost less to build and operate.

### Objective of the Project

The conference addresses four of the six SDWG's thematic areas including Arctic Human Health, Arctic Socio-Economic Issues, Energy and Arctic Communities, and Adaptation to Climate Change. The circumpolar conference will bring together engineers, health experts, researchers, and policy makers to discuss health benefits, challenges and solutions associated with making running water and sewer in small Arctic and Sub-Arctic communities safe, affordable and sustainable. Health care costs and benefits associated with various levels of Arctic and Sub-Arctic water and sewer delivery will be examined. A comparison of technical approaches and the different governance and regulatory frameworks and approaches utilized by Arctic nations will be discussed together with problems and solutions regarding the potential impact of climate change on sanitation infrastructure in the Arctic and Sub-Arctic.

ADEC will present information about **The Alaska Water and Sewer Challenge Project**, a multi-year research and development effort started in 2012 which focuses on decentralized water and wastewater systems. By the fall of 2016, three pilot systems will be available to demonstrate at the conference, where developers will interact with experts from throughout the Arctic to gather input on their ideas. Information about similar projects in Alaska and relevant initiatives from federal agencies will also be showcased.

### Anticipated Outcomes

- Discussion of potential climate-related vulnerabilities on Arctic and Sub-Arctic water and sanitation services.
- Showcase of innovations and ideas. Exchange of ideas regarding regulatory approaches and flexibility regarding small community infrastructure.
- Conference proceedings to include current status of access to household running water and sewer in Arctic and Sub Arctic communities, comparative health data for water-related conditions measured in Arctic Nations, climate-related vulnerabilities for delivery of water and sewer services in the Arctic, conclusions and recommendations.
- Formation of work groups to continue collaborations on Improving Health through Safe and Affordable Access to Household Running Water and Sewer beyond 2017.
- Enhanced international participation for Improving Health through Safe and Affordable Access to Household Running Water and Sewer.
- Publicity about these challenges will help to inform policy makers and non-government organizations, which in turn, could help in funding future efforts.
- This project has been designed to result in benefits for residents of small remote communities throughout the circumpolar north. These benefits include an enhanced understanding among government agencies, engineers and health experts about different approaches to providing household running water and sewer services.

### Conference details

Dates: September 18 - 21, 2016      Location: Anchorage, Alaska.

Target audience: arctic engineering experts, health professionals, end users in arctic communities, academic institutions, regulators and policy makers.

## **Water Innovations for Healthy Arctic Homes Conference**

Anchorage, Alaska, September 18 – 22, 2016

## Sanitation Funding Through the DEC Municipal Grants and Loans Program and the DEC Village Safe Water Program

SFY 2001 - SFY 2012

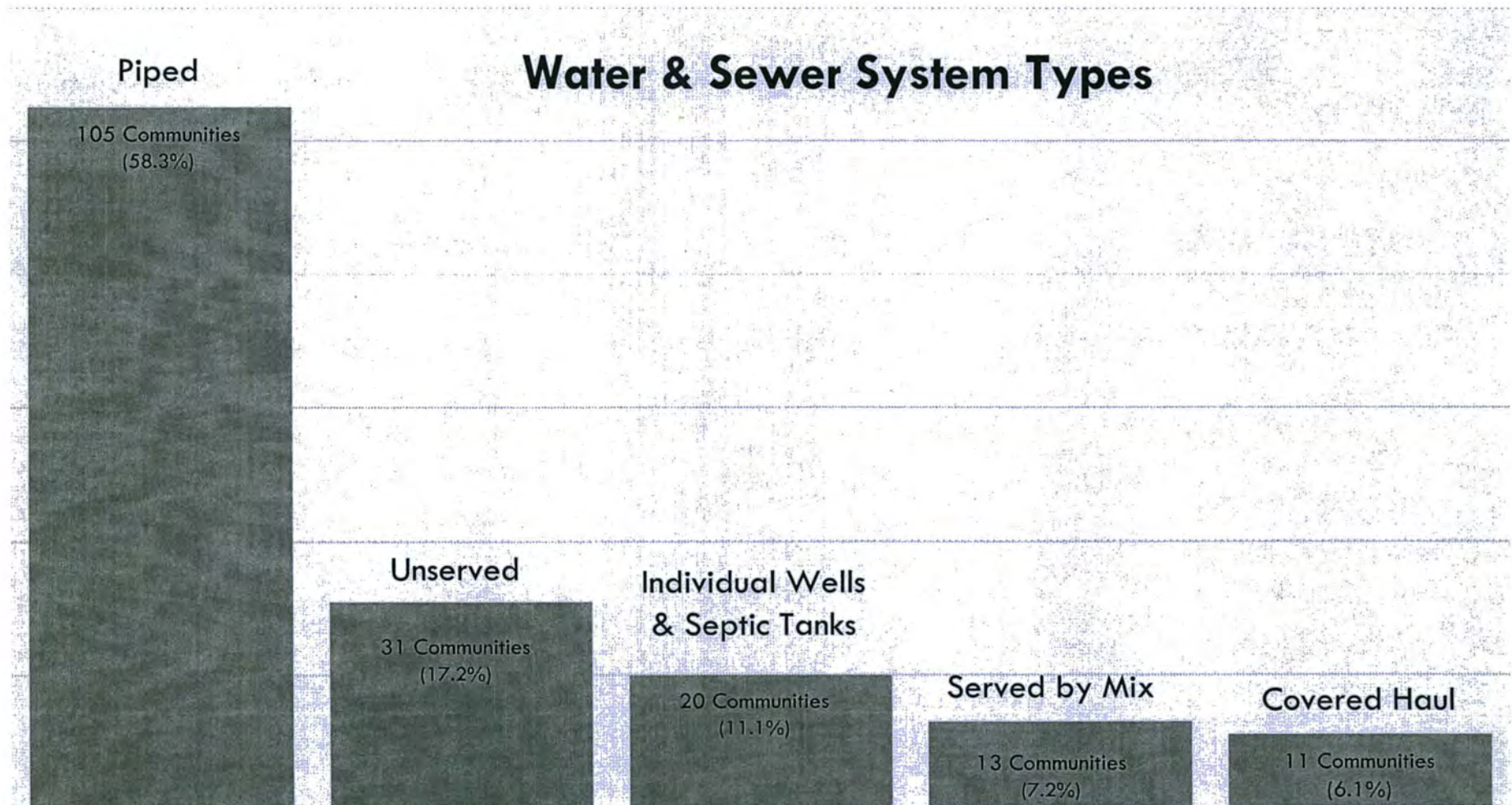
The Municipal Grants and Loans (MG&L) program offers low interest loans and matching grants to the State's larger incorporated municipalities. MG&L grants require a local match between 15% and 40%, depending on the population of the community. The Village Safe Water (VSW) program offers 100% grants to second class cities and smaller communities throughout the state.

SFY	Sanitation Funding Through MMG			Sanitation Funding Through VSW		
	STATE	FEDERAL	TOTAL	STATE	FEDERAL	TOTAL
01	\$13,244,600	\$6,355,050	\$19,599,650	\$13,252,902	\$39,758,800	\$53,011,702
02	\$13,905,600	\$9,605,000	\$23,510,600	\$13,783,737	\$41,345,600	\$55,129,337
03	\$15,404,100	\$8,517,800	\$23,921,900	\$17,034,536	\$51,096,700	\$68,131,236
04	\$6,434,200	\$2,988,800	\$9,423,000	\$20,245,034	\$60,728,900	\$80,973,934
05	\$6,145,400	\$244,500	\$6,389,900	\$19,818,300	\$59,451,000	\$79,269,300
06	\$8,421,600	\$4,413,900	\$12,835,500	\$19,971,601	\$59,706,400	\$79,678,001
07	\$9,238,037	\$3,739,477	\$12,977,514	\$17,270,631	\$51,811,888	\$69,082,519
08	\$22,912,649	\$3,577,482	\$26,490,131	\$16,855,284	\$50,566,358	\$67,441,195
09	\$25,413,245	\$5,825,925	\$23,471,270	\$13,600,002	\$41,324,104	\$54,924,106
10	\$23,189,396	\$0	\$23,189,396	\$12,080,000	\$36,237,800	\$48,317,800
11	\$23,189,396	\$0	\$23,189,396	\$8,899,991	\$26,723,064	\$35,623,055
12	\$21,817,963	\$0	\$21,817,963	\$7,647,226	\$22,941,700	\$30,588,926
<b>TOTAL</b>	<b>\$189,316,186</b>	<b>\$45,267,934</b>	<b>\$226,816,220</b>	<b>\$180,459,244</b>	<b>\$541,692,314</b>	<b>\$722,674,111</b>

**Notes:**

- Figures include funding for studies, design and construction projects.
- Figures do not include one time federal ARRA funding.
- Sources of federal funds include the Environmental Protection Agency and the Department of Agriculture/Rural Development.
- Funding from Federal sources that do not come through DEC or do not require a State match (such as Indian Health Service funding) are excluded.
- State revolving loan capitalization funds are excluded.
- MMG funding information sources: (1) DEC CIP Lists and (2) the State Capital Budget.
- VSW funding information sources: (1) State grant applications for federal funds and (2) federal appropriation bills.
- Though a State match is required, federal funding through USDA may be made directly to communities and ANTHC.

# Rural Alaska Sanitation



**Petroleum Revenues and Permanent Fund Dividend Pay-Outs, 1977-2009 (in millions)**

Petroleum Revenue Source	1977-1981	1982-1986	1987-1991	1992-1996	1997-2001	2002-2006	2007-2009	Total
<b>Petroleum Production Tax</b>								
Unrestricted	\$2,101.7	\$6,962.6	\$4,386.2	\$4,215.9	\$3,217.6	\$3,765.8	\$12,110.1	\$36,759.9
Total	\$2,101.6	\$6,962.6	\$4,386.2	\$4,215.9	\$3,217.6	\$3,765.8	\$12,110.1	\$36,759.8
<b>Oil Conservation Surcharge (Hazardous Surcharge)</b>								
Unrestricted	\$0.0	\$0.0	\$54.9	\$117.6	\$54.7	\$44.1	\$32.9	\$304.2
Total	\$0.0	\$0.0	\$54.9	\$117.6	\$54.7	\$44.1	\$32.9	\$304.2
Unrestricted	\$1.1	\$3.2	\$10.6	\$10.5	\$4.7	\$0.0	\$0.0	\$30.1
Restricted	\$1.3	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1.3
Total	\$2.4	\$3.2	\$10.6	\$10.5	\$4.7	\$0.0	\$0.0	\$31.4
<b>Petroleum Corporate Income Tax</b>								
Unrestricted	\$1,665.8	\$1,472.5	\$746.7	\$603.1	\$1,115.4	\$1,813.4	\$1,692.4	\$9,109.3
Total	\$1,665.8	\$1,472.5	\$746.7	\$603.1	\$1,115.4	\$1,813.4	\$1,692.4	\$9,109.3
<b>Petroleum Property Tax</b>								
Unrestricted	\$877.4	\$668.2	\$463.2	\$310.7	\$243.8	\$242.6	\$258.3	\$3,064.2
Total	\$877.4	\$668.2	\$463.2	\$310.7	\$243.8	\$242.6	\$258.3	\$3,064.2
<b>Petroleum Royalties, Bonuses, and Rents</b>								
Unrestricted Royalties	\$2,597.7	\$5,225.7	\$3,473.7	\$3,215.0	\$3,071.0	\$5,617.5	\$5,455.6	\$28,656.2
Unrestricted Bonuses and Rents	\$1,434.4	\$113.5	\$61.2	\$66.9	\$66.2	\$63.6	\$53.2	\$1,859.0
Total Unrestricted Royalties, Bonuses, and Rents	\$4,032.1	\$5,339.2	\$3,534.9	\$3,281.9	\$3,137.2	\$5,681.1	\$5,508.8	\$30,515.2
Royalties, Bonuses, and Rents to Permanent Fund	\$1,768.2	\$3,679.1	\$1,519.0	\$1,406.9	\$1,334.8	\$2,086.4	\$2,028.8	\$13,823.2
Royalties, Bonuses, and Rents to School Trust Fund	\$17.4	\$40.0	\$28.2	\$36.2	\$22.1	\$39.2	\$38.1	\$221.2
Total Restricted	\$1,785.6	\$3,719.1	\$1,547.2	\$1,443.1	\$1,356.9	\$2,125.6	\$2,067.0	\$14,044.5
Total	\$5,817.7	\$9,058.3	\$5,082.1	\$4,725.0	\$4,494.1	\$7,806.7	\$7,575.8	\$44,559.7
<b>Interest</b>								
Unrestricted	\$0.0	\$0.0	\$0.0	\$0.0	\$11.2	\$15.1	\$15.9	\$42.2
Total	\$0.0	\$0.0	\$0.0	\$0.0	\$11.2	\$15.1	\$15.9	\$42.2
<b>Settlements to CBRF</b>								
Restricted	\$0.0	\$0.0	\$313.9	\$3,707.0	\$1,462.6	\$192.0	\$780.9	\$6,456.4
Total	\$0.0	\$0.0	\$313.9	\$3,707.0	\$1,462.6	\$192.0	\$780.9	\$6,456.4
<b>Other Settlements (Non-CBRF)*</b>								
Unrestricted	\$0.0	\$418.2	\$680.4	\$10.2	\$0.0	\$0.0	\$0.0	\$1,108.8
Restricted	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Total	\$0.0	\$418.2	\$680.4	\$10.2	\$0.0	\$0.0	\$0.0	\$1,108.8
<b>NPR-A Royalties, Rents, and Bonuses</b>								
Restricted	\$0.0	\$22.1	\$12.7	\$0.3	\$42.0	\$74.9	\$32.8	\$184.9
Total	\$0.0	\$22.1	\$12.7	\$0.3	\$42.0	\$74.9	\$32.8	\$184.8
<b>Reserves Tax</b>								
Unrestricted	\$493.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$493.7
Restricted	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Total	\$493.7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$493.7
<b>Total Petroleum Revenue</b>	<b>\$10,958.6</b>	<b>\$18,605.1</b>	<b>\$11,750.6</b>	<b>\$13,700.4</b>	<b>\$10,646.1</b>	<b>\$13,954.6</b>	<b>\$22,499.1</b>	<b>\$102,114.5</b>
<b>Permanent Fund Dividend Payouts</b>	<b>\$0.0</b>	<b>\$3,960.5</b>	<b>\$4,811.5</b>	<b>\$3,270.4</b>	<b>\$2,374.2</b>	<b>\$1,468.5</b>	<b>\$1,458.1</b>	<b>\$17,343.2</b>

**Notes and Sources:** 2009 figures are tentative. Petroleum revenue figures are from Jennifer Duval, Petroleum Economist, AK Department of Revenue. Ms Duval can be reached at (907) 269-1025. Although we believe these figures to be accurate, revenues designated as restricted and unrestricted have changes over the years. As a result, the petroleum revenues in this table should be viewed as approximate. Permanent Fund dividend payouts are from the PFD Division's 2008 Annual Report. Division Director Deborah Bitney supplied tentative 2009 figures.

State of Alaska  
myAlaska  
My Government  
Resident  
Business in Alaska  
Visiting Alaska  
State Employees

## Article 7 - Health, Education and Welfare

### § 1. Public Education

The legislature shall by general law establish and maintain a system of public schools open to all children of the State, and may provide for other public educational institutions. Schools and institutions so established shall be free from sectarian control. No money shall be paid from public funds for the direct benefit of any religious or other private educational institution.

### § 2. State University

The University of Alaska is hereby established as the state university and constituted a body corporate. It shall have title to all real and personal property now or hereafter set aside for or conveyed to it. Its property shall be administered and disposed of according to law.

### § 3. Board of Regents

The University of Alaska shall be governed by a board of regents. The regents shall be appointed by the governor, subject to confirmation by a majority of the members of the legislature in joint session. The board shall, in accordance with law, formulate policy and appoint the president of the university. He shall be the executive officer of the board.

### § 4. Public Health

The legislature shall provide for the promotion and protection of public health.

### § 5. Public Welfare

The legislature shall provide for public welfare.

[Return to Alaska Constitution Table of Contents](#)

State of Alaska  
myAlaska  
My Government  
Resident  
Business in Alaska  
Visiting Alaska  
State Employees  
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