CORRESPONDENCE

And

AGENDA Detour

CHANGES

City and Borough of Sitka
Fire Department

Memo

To: City and Borough of Sitka Assembly

From: Al Stevens, Assistant Fire Chief
Via: Jay Sweeney, Interim Municipal Administrator

Date: May 23rd, 2013

Re: Temporary seasonal hire of Travis Miller

Mayor McConnell and Assembly Members,

I am pleased to write this correspondence in reference to the temporary seasonal hire of Travis Miller. Travis is the son of the Fire Chief. Chief Miller would not be directly supervising Travis, at any time. The Municipal Attorney's interpretation of the nepotism rule does not apply under temporary seasonal hire as indirect supervision does not fall within the category of nepotism.

However, I am fully understanding the nepotism issue in this case and will ensure that the reasons we have the nepotism policy in place shall not be violated. The nepotism policy does apply for permanent positions within the City and Borough and is a separate matter under the interpretation of the policy.

This has been a long and arduous journey in bringing this fully qualified young man into the Fire Department. I thank the hard work of the City Attorney, Human Resources and Mr. Sweeney in allowing an opportunity for Travis to help staff the Fire Department during the busy tourist season.

Cc: Fire Chief

MEMORANDUM

To: Mayor McConnell and Assembly Members

From: Jay Sweeney, Interim Municipal Administrator
Michael Harmon, Public Works Director

cc: Robin Koutchak, Municipal Attorney
Mark Danielson, Human Resource Director

Date: May 23rd, 2012

Subject: **Grade Change for Project Manager Position**

Pursuant to Section 6.4.c of the Personnel Policies Handbook, we are herby informing the Assembly of a grade change to the Project Manager position within the Public Works Engineering Division. This position has been reviewed by the Human Resource Director, Municipal Attorney, and the Public Works Director and deemed to be significantly out of balance compared to positions of equal responsibility and qualifications in Alaska. Furthermore, the current staff member (Kelli Cropper) has over 11-years with CBS performing high level project management for some of the largest projects in the City such as the Fire Hall, Performing Arts Center, and Blatchley Middle School. Ms. Cropper is excelling in this position and should be properly compensated for the work she continues to perform on major projects such as the Centennial Hall, Library, and Pacific High remodels.

Section 6.1.c of the Personnel Policies Handbook specifies that the Administrator may unilaterally change any grades so recommended when it is deemed to be in the best interest of the Municipality. We believe this to be the case for this position not only in terms of retaining high level experienced employees such as Ms. Cropper, but to keep our positions properly graded so it does not become a significant problem in terms of future recruitment.

The adjustments to the budget will be made by way of utilizing the funding that has been set aside for salary adjustments in the FY14 budget. Although this salary increase is from a Grade 31 ($30.70) to a Grade 36 ($41.15), it will be counterbalanced proportionally by increasing the billing rate to applicable grant funded projects currently managed by Ms. Cropper. This will significantly reduce any changes in balancing the General Fund.

Ms. Cropper exemplifies the work ethic and attitude we are working to develop in City Hall. She has assumed responsibility, displayed creativity and innovativeness, worked to further her job knowledge and skills, and worked hard to always put the best interests of the City first. Her response to challenges has always been "how can we make things better", not "what's in it for me". Given this, the adjustment is appropriate.

If you have any further questions regarding the details of this grade adjustment, please do not hesitate to contact us and we will be happy to arrange a time to go through the information as necessary.

Public Works Assembly Update
5-22-13

Federal Land Access Program (Flap) Grant:
The City and Borough of Sitka has been awarded a $916,897 Federal Lands Access Program (FLAP) grant for the Cross Trail Multimodal Pathway (Cross TMP). The FLAP grant will construct two connectors; one connector from Baranof Street to the Cross Trail and one from Yaw Drive to the Cross Trail. Once we receive the final grant acceptance letter, this will come before the Assembly for approval. The FLAP grant has a match requirement consisting of in-kind staff project management and funding donations through Sitka Trail Works.

The Cross Trail project from Yaw Drive to Baranof is currently under design through our agreement with Department of Transportation funded by a Federal Grant of $926,000. The two projects will work together to upgrade the trail system to a multimodal standard between Baranof Street and Yaw Drive connecting to the new Indian River trailhead parking area.

***ANB Harbor Replacement:**
The Assembly approved advertising for bids for the Procurement Contract for ANB Harbor on April 23, 2013. The current schedule has the Procurement Contract bids opening June 7, 2013 and the contract award in June 2013 with float fabrication from late July thru early November 2013.

CBS received the 35% submittal for the Installation Package on May 16, 2013. The Installation Contract is scheduled to be advertised in late August 2013 with contract award in October 2013. Demolition and associated uplands work will likely begin shortly thereafter with pile and float installation beginning around Thanksgiving. Construction is anticipated to be substantially complete by late February 2014.

The US Army Corps of Engineers (USACE) permit advertisement was sent out to various State agencies on May 15, 2013 with agency comments due by May 24, 2013. The USACE has determined that the project is being reviewed under the Nationwide Permit Program rather than an individual permit which means a Public Notice is not required and the review period was reduced from 30 days to 10 days.

The rough order of magnitude cost estimate for ANB Harbor (to include design, permitting, construction, and contingency) is approximately $8.5 million. The estimate will be revisited and refined at each project milestone.

CBS received a FY13 State of Alaska Municipal Harbor Facility Matching Grant, for the ANB Harbor Replacement Project, which will cover 50% of eligible construction costs not to exceed $4,250,000 in match funding. CBS has received bond proceeds from the

Alaska Municipal Bond Bank in the amount of $4,600,000 for this project. On January 10, 2013, the Assembly awarded a Professional Services Contract to Moffatt & Nichol for the ANB Harbor Replacement Project.

***Centennial Hall Renovation:**

The consultant is continuing the 35% design of the project. The 8th Building Design Committee (BDC) meeting was held May 15, 2013. This meeting focused on the exterior building elevation options. The current options include space for the Museum in phase one construction. This option also allows for more exhibit/meeting space than previous options and places the Museum in its final location so it only has to be moved once. The Design Development Staff has been meeting weekly to work out both interior layout and the exterior look. An assembly workshop and public meeting is planned for the first week in June 2013 to present the floor plan, exterior elevation options and preliminary budget.

Current grant funding allocated to the project is $8,230,000 and the project has a current total project cost of $15.2 million including a new museum wing. Additional FY14 Legislative Priority Requests consists of $4,200,000, for the building improvements and $3,341,000 for combined Library/Centennial Hall heating system improvements. The state grant ($2,000,000) for a lightering facility visitor's center (previously planned for under the O'Connell Bridge) may be used for this project to provide a visitor center for the Crescent Harbor lightering facility. Additionally, we have approximately 2 million dollars from the Marine Passenger Fee Fund that would be eligible for this project. If additional funds are not secured, the scope of the project will need to be phased with additional museum and meeting space expansion planned for the future if and when funding becomes available.

Centennial Hall & Library Site and Parking Lot Development:

The project is being completed in phases with milestone completion dates for each phase. Phases I and II consist of the Centennial Hall and Library Parking lot areas. Phase III is Crescent Harbor parking lot and Phase IV is the pedestrian promenade area next to the lightering dock on the east side of Centennial Hall. The Contractor is currently working on Phase II and IV of the project with installation of concrete curb and gutter and sidewalk. Partial closures to areas of the Crescent Harbor parking lot will be taking place in order to install the new storm drain system that is part of Phase II of the project.

A summary of the project phasing is:

Phase I: Demolition of existing asphalt, curbs, sidewalks relocation of the canoe, underground utilities including 60" CMP (corrugated metal pipe), **Phase I was completed March 15, 2013.**

Phase II: Remove trees to be transplanted, temporarily transplant trees, relocate Baranof Statue, remove existing lighting, adjust electric utility vault, relocate electrical, construction surveying, place 2" minus shot rock, install curb and gutter, install sidewalk, unit pavers, temporary concrete, decorative concrete, concrete landscaping features, Completion of Phase II is scheduled for June 1, 2013.

Phase IV: Demolition of existing asphalt pavement, curbs, sidewalk, landscaping features, lighting, storm drain pipe and structure removal, excavation, install curb and gutter, install sidewalk, decorative concrete, install underground storm drain pipe and structures, signs, install new lighting, and other items of work. Completion of Phase IV is scheduled for June 15, 2013.

Phase III: Demolition of existing asphalt pavement, curbs, sidewalk, landscaping features, lighting, storm drain pipe and structure removal, install curb and gutter, install sidewalk, unit pavers, decorative concrete, asphalt pavement overlay, excavation, construction surveying, place 2" minus shot rock, install underground storm drain pipe and structures, signs, striping, install new lighting, start landscaping (all landscaping to be completed by end of Phase IV) and other items of Work. Completion of Phase III is scheduled for September 30, 2013.

S&S General Contractors was awarded the contract in the amount of $2,613,651. Construction started in late January 2013 and final completion is scheduled for September 30, 2013. The total project budget is $3,950,000.

***Alternative Water Source Investigation Filtration (Blue Lake Project):**

The consultant has prepared the report for submission to Alaska Department of Environmental Conservation (ADEC) for review. The proposed schedule has the design completed in October 2013, ADEC permitting completed in March of 2014, construction of the piping and pumping completed in April 2014 and final installation of the filter units in June 2014 for operation in July 2014. The preliminary design has a projected design and construction cost of $3,000,000. Due to the lack of well potential in the Indian River Valley, temporary surface water filtration will need to be utilized during the Blue Lake Project outage. Award of the design contract was approved by the Assembly on February 12, 2013.

Alternative Water Source Investigation Wells (Blue Lake Project):

Significant water well potential exists at Starrigavan Valley. However, the likelihood of having infrastructure in place prior to the planned 2014 shutdown of the penstock from Blue Lake is unlikely. A draft final report, complete with findings and recommendations, was received by Public Works in early April 2013. The report assesses potential well yields and includes water quality testing data relative to drinking water criteria. The consultant is currently assisting CBS with water rights applications within Starrigavan Valley through the Alaska Department of Natural Resources.

Given that the Blue Lake Penstock will need to be shut down for inspection every five to ten years, finding an alternative water source is important beyond the initial Blue Lake project outage in 2014.

On April 10, 2012, the Assembly authorized the expenditure amount not to exceed $700,000 for the purpose of exploring alternative water source alternatives.

***Ultra Violet (UV) Disinfection Facility:**

We are completing the negotiations with the design consultant (CH2MHill) to complete the UV disinfection facility design. The UV reactors are being manufactured by Trojan Technologies. These components will be installed in the new UV disinfection building. The project to design and construct the Facility will be operational by 2014. Public Works anticipates completion of the water line tees for the new UV Treatment Facility in June 2013. On February 14, 2013, the Assembly approved award of a contract to CBC Construction for the amount of $179,960.

The Blue Lake drinking water system is a surface water system, which must comply with the EPA Enhanced Surface Water Treatment Rules (ESWTRs). The subject UV Disinfection Facility will provide the additional microbial and disinfection controls required under the ESWTRs.

Funding for this project will come from State loans and grants.

- $4,000,000 FY 2011 State of Alaska Department of Environmental Conservation (ADEC) Loan. Includes $2,500,000 financed with $1,500,000 subsidized.
- $2,550,000 FY 2012 ADEC Loan (pending).
- $3,500,000 FY 2012 ADEC Grant (30% local match requirement)
- $2,061,000 FY 2013 ADEC Grant (pending - 30% local match requirement)

$12,111,000 Total Project Funding with a current project budget of $8,966,000

The grants and loans indicated as pending are grants and loans listed on the Alaska Drinking Water Fund intended use plans which CBS has submitted appropriate paper work to have the grant or loan finalized.

***Library Development Planning:**

The library expansion options were presented to the Assembly on September 25, 2012. The Assembly approved the 50% - 60% option moving forward to a Request for Proposals (RFQ), to design the project. The MRV Architects design team was selected to begin contract negotiations with a planned contract award on May 24, 2013. We are currently reviewing MRV's proposal and are nearing a final agreement.

The design phase is expected to take 12 months with advertisement for construction planned for spring 2014. The project construction may be completed in late 2014 or in 2015. The State funding of $5.7 million awarded to CBS is a direct appropriation with no funding match requirements. A private donation of $400,000 has also been given to the project by the John J. and Eleanor Brust Family. $350,000.00 of the budget is allocated to the Centennial Hall Parking Lot Project to relocate the Swan Lake Storm Drain, leaving a current project budget of $5.75 million for the expansion and renovation of the Library.

***Baranof Street Water and Sewer Improvements:**

The project includes water, sewer, storm drain, curb & gutter, sidewalk and pavement improvements and has a total funding of $2,672,500.00 including Alaska Department of Environmental Conservation (ADEC) Municipal Matching Grant and Loan funds. Bids were opened for this project on April 11, 2013. The contract to construct was awarded to S&S General Contractors on the April 23, 2013 Assembly meeting ($1,712,916.00). The contractor has begun to submit technical submittals for review. Construction is scheduled to begin after the end of the school year ending May 30, 2013. The total estimated cost of the project is $2,232,000.00.

Public Works has completed working with property owners at 200 Baranof Street and 603 Etolin Street to obtain a small portion of additional right-of-way for the Baranof Street project. In both instances, existing improvements (asphalt pavement) are located on the subject properties. The small property acquisitions are required to maintain the existing right-of-way widths and install necessary drainage improvements. Both property owners are amenable to the City acquiring this property and a replat of the properties is scheduled for the next Planning and Zoning Commission meeting.

Blatchley Middle School:

The project is approximately 95% complete, within its budget and on schedule for completion in 2013. Installation of wall and floor finishes continues. The Contractors are working on completion/correction of items noted by the Engineers and Commissioning Agent found during the January inspections. The Commissioning will be scheduled upon completion of the punch lists and receipt of required documentation. The project budget is $12.475 million. The contract required substantial completion date is August 1, 2013 and is within project budget.

***Pacific High School:**

The building is approximately 45% complete. It is 'dried in'- the roof sheathing is installed and the waterproof membrane and roofing installation is beginning. A portion of the roof has been shingled. Interior walls are being framed. Electrical and Mechanical rough-in is underway. Contractor's schedule predicts the project completion prior to the required substantial completion. If accomplished, this will allow the school to be open for the fall 2013 semester. The project budget is $2.671 million. The contract required substantial completion date is December 1, 2013 and is within project budget.

*Storm Water Master Plan Phase II:

Tetra Tech came to Sitka In April to locate, evaluate and analyze existing storm water drainage system problem areas. This work was completed by the Tetra Tech team as scheduled. Preliminary GIS data and reports are scheduled to be received the week of May 20, 2013.

The first phase of the Storm Water Master Plan was completed the end of June 2012 with Tetra Tech Alaska, LLC gathering existing infrastructure data and condition inventory to include in our GIS system along with precipitation analysis and drainage basin delineation as part of the first phase of the project. The second year grant funding (FY13) was approved by the Alaska Department of Environmental Conservation and the grant agreement was authorized by the Assembly in July 2012. The grant amount of $43,388 requires a forty percent CBS match of $28,925.

Phase II of the Storm Water Master Plan will use the data collected from the FY12 project to:

1) Provide more detailed hydrologic modeling of defined drainage basins and estimate storm water runoff quantities based upon the various intensity rainfall events developed in FY12.

2) Evaluate and analyze features of the existing storm water drainage system, identifying components that are inadequate or undersized based on design storm criteria, and provide design alternatives to maximize the capabilities of the storm water system at the lowest cost.

3) Develop a final report that includes recommendations for future storm water projects, opportunities to apply Best Management Practices (BMPs) and/or Low Impact Development (LID).

Sitka Community Hospital Roof Replacement:

The Assembly approved award of a construction contract to CBC Construction, Inc. in the amount of $784,754.16 for the Sitka Community Hospital Roof Replacement project on April 23, 2013. Due to the very competitive bid received, a change order to the contract was approved to change the insulation to a better product (polyiso instead of EPS). Public Works recently completed a review of submittals from the Contractor. Public Work anticipates construction during summer 2013 and substantial completion by August 31, 2013.

The project is funded through a $1,200,000 FY2013 State Legislative Grant.

*Swan Lake Restoration / Dredging Project (Project # 90747):

The Assembly approved award of a construction contract to Island Enterprises, Inc. in the amount of $399,806.00 for the Swan Lake Restoration – Lake Dredging project on

April 23, 2013. The project includes dredging prioritized selected locations to improve water flow through the lake, winter habitat for fish, access and recreation in general. The Swan Lake dredging project was planned to take place this summer, however may be deferred until the summer of 2014 per project specifications and the preference of the low bidder. Public Works is investigating any possible implications to funding or permitting if the work is delayed one season.

The City and Borough of Sitka received $771,236 in Federal funds through the Coastal Impact Assistance Program (CIAP) for this restoration project on Swan Lake. The grant is administered through the Wildlife and Sport Fish Restoration Program, CIAP Branch and runs through December 2015.

Edgecumbe Drive Street Reconstruction:

The project is funded through a $2,900,000 FY2013 State Legislative Grant (Paving Failed Collector Streets – Edgecumbe Drive and Jeff Davis Street). Budgetary cost estimates were completed to help scope the project based on funds available. That estimate indicates approximately $5.5 million would be required to completely rebuild Edgecumbe Drive from Kimsham to Cascade Creek to include paving, curb and gutter, sidewalk, and storm drain (budget shortfall of $3.25 million); approximately $3.5 million would be required to rebuild Edgecumbe Drive from Kimsham to Cascade Creek to include paving and storm drain only (budget shortfall of $1.25 million); and approximately $2.5 million would be required to rebuild Edgecumbe Drive from Kimsham to Cascade Creek to include paving the drive lanes (not shoulders) and storm drain (budget shortfall of $250,000). Public Works staff has begun planning level work for this project. Test borings were completed along Edgecumbe Drive in areas of suspected subgrade failure and in other areas of interest on March 4-5, 2013. This information will assist in the design of the improvements. Public Works anticipates construction during the summer of 2014.

Sawmill Cove Industrial Park Marine Services Industry Feasibility Study:

The RFP for proposals began advertising on February 25, 2013. The scope of the project includes an evaluation of the suitability of a marine haul out facility, a moorage facility for large commercial vessels and a deepwater dock and related infrastructure. The project is funded by a Federal Earmark of $486,917. The project will be administered by Public Works and the Sawmill Cove Industrial Park Director Garry White. The funding is through the State of Alaska and their procurement procedures will be followed to meet the Federal requirements. The single proposal was received March 29, 2013. The proposal has been reviewed and approved by the Sawmill Cove Industrial Park Board and Public Works is negotiating with the sole proposer, Northern Economics and PND Engineering.

***Wastewater (WW) Division Routine Maintenance:**

During the first part of May WW operators continued sprucing up the interior of generator buildings. Jamestown Bay's generator building was cleaned, painted inside and concrete floors were sealed. The new impeller that was installed on the lead pump

at Lake and Lincoln Lift Station a few weeks ago, was checked and found clear of debris. This pump runs nearly 24 hours a day and has had problems with the impeller plugging with "rags". The new impeller is the manufacturer's solution – so far so good. Approximately three months ago new check valves were installed on the sludge pumps in the treatment plant, the original style were wearing out and were subject to catching stringy material in the sludge creating the need to open and clean these 4 check valves every few months. The style of the newly installed rubber check valves has been very successful in reducing maintenance in the lift station system. The new sludge check valves were inspected recently and had no buildup of stringy materials at all. We will change the preventative maintenance inspection schedule from 90 days to 120 days.

***Water Division & Blue Lake Expansion Project:**

Blasting and excavation near the intake at the lake has caused numerous turbidity spikes to date. Water operators and the contractor are working very closely communicating before each blast. We have developed an early warning system and plant shut down procedure which we have used a few times when a short duration turbidity spike is higher than regulations allow. We have been successful in detecting the spike at a turbidity meter installed at the campground hydro facility which is approximately 40 minutes before that slug of water in the penstock reaches the water plant. Operators can stop flow to the water plant before the turbid water reaches it, keep the plant off line with the community served from water in the three storage tanks for an hour or two, until the "dirty water" passes through the Blue Lake Hydro, then restart the water plant. This process has worked well and is transparent to the customers.

Michelle Bonnet-Hale, Director of the Division of Water for ADEC, toured the work at the lake May 15, 2013. She was very impressed with the project's overall high level of concern/attention for drinking water quality and with Blue Lake as a source in general.

***Water/Waste Water (W/WW) coordinates with QAP:**

W & WW operators have been working closely with QAP, the Sawmill Creek Rd. contractor, to locate and protect our infrastructure during their blasting which is necessary to widen the road. QAP and the Water Division have spare parts ready in case an emergency repair is needed.

***Water Service Leaks:**

During the first two weeks of May, the Water Division responded to 13 customer call-outs: seven for locates, six for service leaks. All leaks were on the customer side of the service lines.

***Drinking Water Quality Report/Consumer Confidence Report**

The annual Consumer Confidence Report was distributed to all water customers by direct mail and has been posted on the city web site. This report is required annually by state and federal drinking water regulations. The Water operators are also preparing for the annual June Lead and Copper sampling which takes place at the household tap inside 40 specifically selected homes.

***Water Division Works on ANB Harbor Renovation & new Service Line to Crescent Harbor:**

Water operators have been working w/ Engineering and the design consultant for a new water system for ANB Harbor. The Water Division is also assisting Engineering and the Harbor Dept. in selection of materials for replacing the water service line to Crescent Harbor. The work will be done before the new Seawalk project installs a new sidewalk past the area of the water service crossing.

***Waste Water (WW) Operators Assist with Centennial Building Project:**

WW operators continue working closely with the contractor on the Centennial building parking lot as the work relates to our lift station and wet well located within the work area. Operators coordinated with the contractor to reroute level control lines to keep the pump system in operation and installed a new cathodic protection system to protect the buried steel pump room from corrosion. Recently, a new hatch was installed on the pump station's wet well, improving future access.

***W/WW Tour for Rotary Exchange Group from Brazil**

A group of Rotarians from Brazil toured our Water and WW facilities in early May. The Brazilians were quite interested in our treatment systems.

***Cross Trail STIP:**

On February 14, 2013, Parks and Recreation Division staff learned that the Alaska Department of Transportation (ADOT) re-instated 2013 – 2015 Statewide Transportation Improvement Program (STIP) funding for the Cross Trail Multimodal Pathway. The amount re-funded for FY'13 and '14 was $836,000. The STIP funding is for the construction of the 4,345' central section of the existing Cross Trail from approximately the Mental Health property to Yaw Drive. ADOT has provided CBS with an updated schedule for the project that is under staff review. Currently the trail alignment has had a preliminary survey; permitting and easement negotiations are underway.

***Alaska Community Forestry CBS Inventory:**

CBS Parks and Recreation staff is working with the Alaska Community Forestry Program to complete a Community Forest Management Plan and survey for urban trees in park areas owned by CBS. This plan includes a tree ordinance that is being worked

on by the Tree and Landscape Committee. The project is funded with a $26,000 grant from the Alaska Community Forestry Program. The draft plan was presented at the April 9, 2013 Assembly meeting. Alaska Community Forestry staff is in the process of making final revisions and the plan to try and present to the Assembly for approval is anticipated for June 2013.

***Access Walkway by Brenner's:**

John Rennie has completed the first part of the access ramp beside Brenner's. A red herringbone pattern in concrete has been placed and looks very good. Lee's Fabrication will be fabricating and installing the Aluminum railings in two weeks. The project continues to move forward as weather allows.

***City Hall Window Replacement – 3rd Floor:**

Bids were opened February 26, 2013. H Construction was the low bidder at $64,500.00. The Assembly approved award of the Contract at the following meeting held March 12, 2013. The project is funded out of the Building Maintenance fund.

The project consists of replacing 27 windows on the third floor of City Hall. All 27 windows have been installed and completely trimmed out on the inside and weather tight with Vycor on the exterior. All but two windows have been caulked and painted on the inside. The project is approximately 50% complete and on schedule. The substantial completion date is June 30, 2013.

City & Borough of Sitka
Electric Department
105 Jarvis Street, Sitka AK. 99835
Telephone: 907-747-4000 Fax: 907-747-3208

Memorandum

May 15, 2013

To: Assembly, City & Borough of Sitka
Via: Jay Sweeney, Interim Municipal Administrator
From: Christopher Brewton, Utility Director
Subject: **Energy Star Final Report**

Attached, for your information, is the final report closing out the Energy Star Rebate Program. I am very pleased with the results and appreciate the Assembly support to approve this endeavor.

In particular, I wish to acknowledge the hard work and effort of Juliet Agne, Electric Department Administrative Assistant, who willingly volunteered to take the lead on the project. First, she ensured our program was registered as an authorized Energy Star participant. Then, she helped design the various application forms, developed a user guide that answered frequently asked questions, handled countless phone calls and office visits, validated all applications and rebate requests, and provided progress reports for the duration of the project. Juliet did an exemplary job managing the program and was directly responsible for its success.

In summary, 194 individual rebates were issued for Energy Star appliances and heat pumps saving an estimated 35,000 kWh of energy each year. This is significant and equates to the annual energy consumption of about 23 households. In addition to the energy reduction for the electric system, and lower utility bills for our customers, there were other tangible benefits as well, including;

- ✓ approximately $400,000 in local/regional sales of new appliances
- ✓ an estimated $20,000 in local sales tax revenue
- ✓ significant work for local contractors to install heat pumps
- ✓ renewed interest in State energy efficiency programs
- ✓ interest from other Southeast communities about the program

In conclusion, the Energy Star Rebate program was a wise investment in energy efficiency improvements and plays a significant role in our community strategy to maximize the use of our limited hydroelectric resources. And our efforts are being noticed.

The attached figure is from a recent report completed by the Cold Climate Housing Research Center that indicates Sitka is a regional leader in supporting heat pump technology. (Stevens, Craven, Garber-Slaght, 2013)

Vanessa Stevens, Colin Craven, Robbin Garber-Slaght (2013). *Air Source Heat Pumps in Southeast Alaska.* Fairbanks: Cold Climate Housing Research Center.

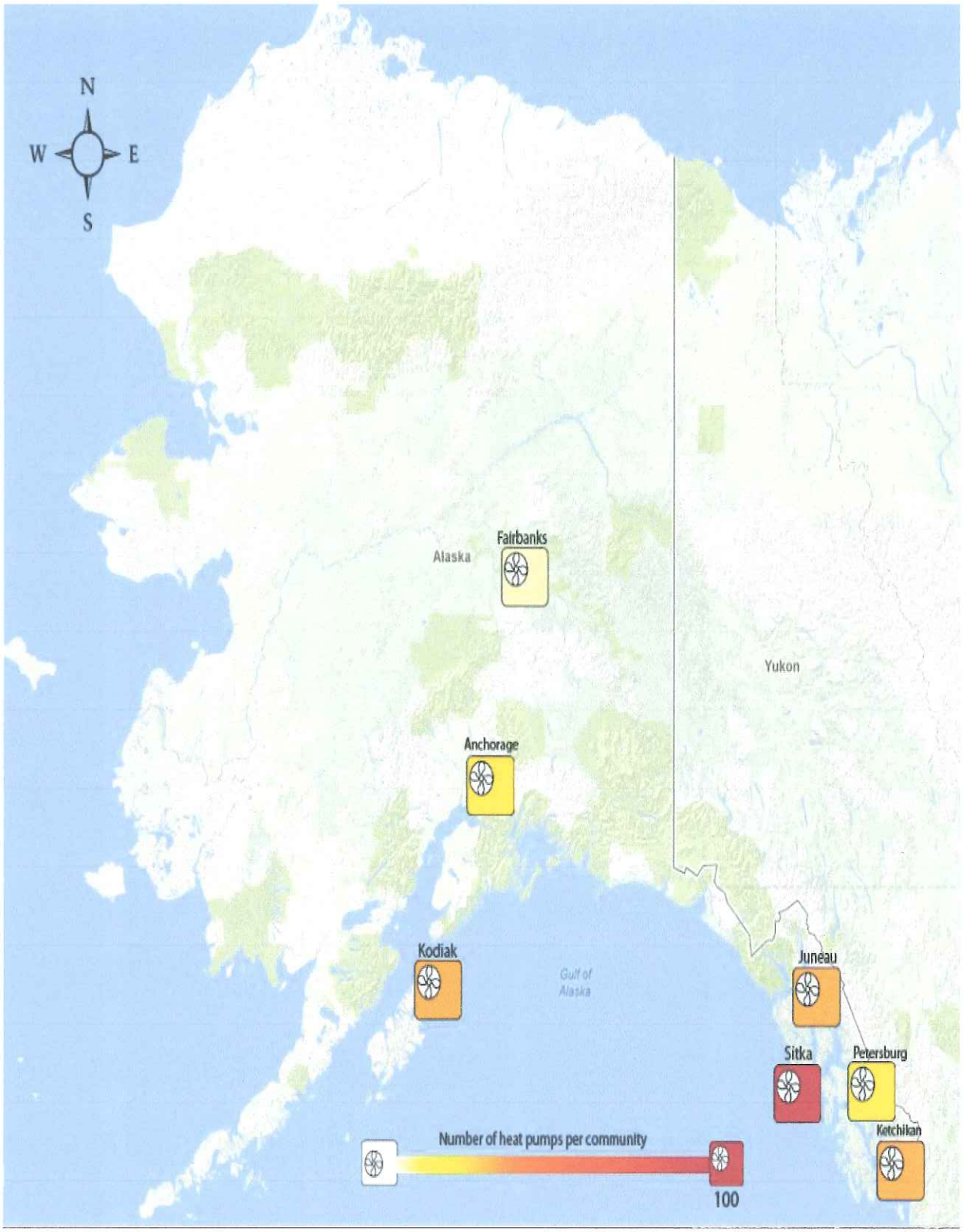
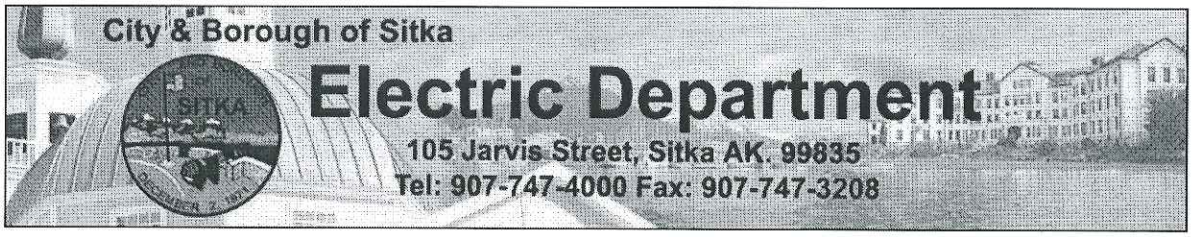


Figure 1- Current Air Source Heat Pump Installations



Energy Star Rebate Program

Final Report

Juliet Agne

5/14/2013

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BACKGROUND

Sitka residents are fortunate to be supplied with hydropower to meet the town's electrical load with sustainable, renewable, and affordable electricity. However, with the increase of fuel costs impacting our small community, many residents have switched from oil heating to electric heating for their homes. This was a wise move for the consumer because at current fuel oil prices, heating with electricity is cheaper than fuel oil. For the producer and distributor of Sitka's electricity, this became an issue that needed to be addressed quickly. With the electrical demand reaching maximum generation capacity, Electric Department officials needed to act fast to ensure there is enough power available to supply the community.

How does a utility address a rapidly increasing electric demand that is close to generation capacity? By encouraging the public to conserve power to lessen the load on the hydroelectric generators and to expand available hydro resources to produce more power to sustain the community. This, in turn, decreases the need to produce electricity with the diesel generators, which is not sustainable or cost effective. The Electric Department has developed multiple projects to encourage electrical conservation, including the Energy Stoplight and the Energy Star Rebate Program, and is engaged in one of the biggest projects in Sitka's history with the Blue Lake Hydroelectric Expansion Project.

The Energy Star Rebate Program was a collaborative effort developed by Bitty Balducci, Electric Department intern shared with the Sitka Conservation Society, City Electric Department staff, City Finance staff, and City Public Works Department staff. The purpose of the program is to help electric consumers become energy efficient and act as a catalyst for future energy efficiency upgrades in Sitka. By choosing more energy efficient appliances, electric consumption in the community is decreased and the demand on electric generation is reduced, thus reducing the need to run the diesel generators for supplemental generation.

Why does this matter? When the cost of fuel reached about $3.00 per gallon, many Sitka residents and some government owned buildings, switched to electric heating to heat their buildings. As a consumer, switching to electric heating was more economically feasible because the cost of electricity is cheap relative to the cost of fuel oil. However, with this trend

to convert to electric heating, the demand side of electricity is starting to reach our hydroelectric generation capacity.

In general, the City has a particular generation capacity on the hydroelectric generators. As the maximum capacity is approached, the need for supplemental electrcity is needed from our diesel generators. It costs the City more money to run the diesel generators, outside of general maintenance purposes, than it is for consumers to produce heat using their own heating system (fuel oil, wood, general electric heating). The more it costs the City to produce electricity, the more it will cost the consumer. Whenever the City utilizes the diesel generators to produce supplemental electricity in order for the system to operate normally, a fuel surcharge must be added to residents' utility bills to cover fuel costs for the generators. In the long run, the surcharge will cost more to the consumer than producing heat for their homes on their own because the diesel generator is not as efficient. For example, one gallon of oil burned in an oil furnace is about 90% efficient, while one gallon of oil burned in the diesel generator is about 35% efficient. Until Blue Lake Expansion Project is completed, other programs are needed to assist the community with energy efficiency.

DATA COLLECTION

Bitty Balducci, Electric Department/Sitka Conservation Society Intern, did extensive research to explore various rebate programs around the state and nation in order to get a baseline of standards for our program. She also researched various appliances to gain a better understanding as to which appliances to choose. The vision for the program was to take the most inefficient energy consuming appliances and replace them with more efficient ones in order to lessen the electrical demand on the grid. So qualified participants will receive rebates for purchasing an Energy Star appliance to replace their older, more inefficient appliance.

A public, online opinion survey was also conducted in order to get an idea whether or not the community would participate in this type of rebate program. This is the first appliance rebate program in Sitka and it was not clear whether or not the community would respond positively or negatively. The survey was designed to be super simple and not very time consuming. It was advertised for two weeks for public input.

Out of the 50 participants who responded to the online survey, 96% said they would be interested in participating in the Energy Star Rebate Program if it became available. Survey participants were also asked to rank appliances the Electric Department should consider for the program. Table 1 shows the results from the survey.

Table 1.

Appliance Rank	
1.	Refrigerators/Hot Water Heaters
2.	Dryers
3.	Freezers/Heat Pumps
4.	Washers
5.	Dishwashers
6.	Other

Refrigerators and hot water heaters both tied for the most highly ranked appliance, followed by dryers, freezers and heat pumps, washers, dishwashers, and other appliances. Other suggestions include light bulbs, boilers, insulation, and windows. Out of the appliances on the survey, refrigerators, freezers, washing machines, heat pumps, and heat pump hot water heaters were chosen for the program. These appliances have models that are Energy Star Rated and are easily accessible for purchase.

Once appliances were chosen for the program, rules, funding, and program outlines were then drafted. Permission was also sought from Energy Star in order for us the use their logo and promote their products. Currently, the City of Sitka is a certified Energy Star Partner. Permission was also needed from the City Assembly since a generous amount of funding needed to be moved into a special account for this program. The City Assembly fully supported the Energy Star Rebate Program and saw it as a benefit to the community.

RESULTS

The Energy Star Rebate Program was very successful. The program was scheduled to run from February 24, 2012 to June 30, 2013, or until funds run out. The funds ran out on January

15, 2013. Last checks for the program were issued on February 1, 2013. Table 2 shows the total number of rebates issued for the various appliances.

Table 2.

Appliance	Total $ Dispensed	Total # of Items
Total Freezers	$2,970	18
Total HPHWH	$1,800	3
Total Refrigerator	$18,750	75
Total Washing Machine	$15,950	58
Total Heat Pumps	$60,000	40
Total	$99,470	194

At the time, when the last thousand dollars were available in the fund, a flood of applications came in. However, the last few applications reviewed did not qualify for rebates and funding was still available in the account. Instead of playing the waiting game for one or two more applicants and deciding who is granted the last few rebates, it was decided to keep the program closed and use the remaining funds to cover costs incurred by the program (i.e. advertising).

PROGRAM BENEFITS

So what is the community and the City and Borough of Sitka gaining from this program? The local consumers benefit from the Energy Star Rebate Program by reducing their overall electrical demand on the system and lowering their energy costs, and lessening the potential of utilizing the diesel generators for supplemental power. Local businesses who sold Energy Star rated appliances benefitted from this program and helped keep funds in the local economy. Even when appliances were ordered from out-of-town businesses, in some cases, additional items needed to be purchased in order to make the appliance operate (power cord, duct, or local labor). The City benefits from not having to run diesel generators for electrical generation (only for maintenance work), which in turn, saves money for the consumer. Another benefit from this program is that by properly disposing of one's freezer or refrigerator at the Sawmill

Cove Recycle Center, chloroflurocarbons (CFCs) in the appliance are not released into the environment.

SAVINGS

Believe it or not, through this program, we, as a community, are saving 29,632 kWh per year with the appliances purchased, excluding heat pumps. That is a total savings of $3298.08 in energy costs. An average household uses approximately 1500 kWh per month. This savings is equivalent to 1.6 households using 1500 kWh per month each year. So we just took a whole house and a half off the grid.

Appliances

The following table, Table 3, is a breakdown of total kWh saved per year from each appliance (minus heat pumps). The calculations used to obtain the following numbers were applied using Energy Star Ratings for that particular appliance.

For example, an Energy Star Rated refrigerator is rated to use 577 kWh per year, which is 20% less than a non rated refrigerator of similar characteristics. Assume these values apply when the refrigerator is under normal operating conditions, a non rated refrigerator would be using 721.25 kWh per year. The Energy Star Rated refrigerator is using 144.25 kWh less energy per year and, therefore, is a savings of 144.25 kWh. This value was multiplied by the number of that model purchased for the program and then added together to the other savings from other models to come up with the total savings.

Table 3.

Appliance	Number	Total KWh Saved Per Year
Freezers	18	8602
Heat Pump Hot Water Heaters	3	8674.5
Heat Pumps	40	
Refrigerators	75	10150.12
Washing Machines	58	2205.75

Total Energy Saved (KWh) = 29632.37

Total Saved ($) = 3298.08

Heat Pump Hot Water Heaters

Calculating the savings for heat pump hot water heaters and heat pumps was the most difficult to calculate because of multiple uncontrollable variables. For heat pump hot water heaters, savings depend on the main source for hot water heaters. It was unclear what power source was used for the hot water heater in the applications submitted. Therefore, various scenarios were calculated and averaged in order to make a reasonable guess on savings. Table 4 illustrates the various savings from the different sources comparable to an Energy Star Rated Heat Pump Hot Water Heater.

Table 4.

Water Heater Type	Consumption		Yearly Energy Cost	Savings (KWH)	Savings ($)
Conventional Oil-Fired Storage	273	gallons	$1,127.49	N/A	$969.73
Minimum Efficiency Electric Storage	4874	kWh	$542.48	3018	$256.53
High Efficiency Electric Storage	4621	kWh	$514.32	2765	$235.03
Electric Heat Pump Hot Water Heater	1856	kWh	$206.57	-	-

In order to get the total savings per year value found in Table 4 for heat pump hot water heaters, the savings was averaged between the minimum and high efficiency water heater types, and then multiplied by the number of heat pump water heaters qualified for rebates.

Heat Pumps

Saving calculations from heat pumps were difficult to calculate because there was no definitive baseline to compare to any savings. In this case, many assumptions were set before any calculations were done.

All heat pump models have three ratings that rate their efficiency levels. They are the Seasonal Energy Efficiency Ratio (SEER), Energy Efficiency Ratio (EER), and the Heating Seasonal Performance Factor (HSPF). The higher the number, the more efficient the heat pump. All three ratings are measured by British Thermal Units per Watt Hour (BTU/Wh). To calculate an average usage per year to get cost and usage values, the following assumptions were made using the HSPF value as the main multiplier.

Assumptions:

- Hours of operation for one heat pump was assumed to be 12 hours per day.
- A heating season was estimated to be 125 days. This means that a heat pump will be used to heat one's house for 125 days out of the year under average operating conditions.
- Price per kWh is the average residential rate: $.1113/kWh.
- For the baseline numbers, an average household uses 1500 kWh per month under normal operation. On average, 35% of the monthly kWh usage is assumed to be electric heating. Therefore, the baseline usage for electric heating is 525 kWh per month.

There were 40 heat pump rebates issued as part of this program, however, 48 total heat pumps were installed from the 40 applicants. This is because some applicants installed more than one heat pump or multiple models of heat pumps recorded on their one application. In order to figure the total savings from all of the installed heat pumps, all models in each application were documented and thoroughly researched for Energy Star Ratings and for their SEER, EER, and HSPF numbers. Applicants were also able to mix and match heat pump units with an indoor and outdoor model. These were accurately recorded and utilized properly in the calculations.

The following table, Table 5, indicates the various brands, model names, ratings, and capacity of heat pumps. The heat pump models are not sorted by indoor/outdoor models.

Table 5.

Brand	Model Name	SEER (Btu/Wh)	EER (Btu/Wh)	HSPF (Btu/Wh)	Capacity (Btu/h)	Total Purchased Heat Pumps
Fujitsu	ASU15RLS2 AOU15RLS2	25.43	12.2	14.01	14500	26
Fujitsu	ASU9RLS2 AOU9RLS2	30.36	16.83	13.98	9000	3
Fujitsu	AOU18RLXFW ASU18RLF	19.2		10	18000	1
Fujitsu	AOU24RLXFW ASU24RLF	18		10	22000	3
LG	LMCN185HV	17	9.6	9.1	18000	1
LG	LMU369HV	17	12	10.5	34000	1
LG	LMCN125HV	16		10	12000	1
LG	LMN096HVT	17.5		10	9000	1
Mitsubishi	MSZGE18NA	19.20		10.00	17200	4
Mitsubishi	MUZGE18NA	19.20		10.00	17200	2
Mitsubishi	MUZFE12NA1 MSZFE12NA	23		10.6	12000	1
Mitsubishi	MSZGE06NA	18		10	6000	1
Mitsubishi	MSZGE09NA	21		10	10900	1
Mitsubishi	MSZGE15NA	21		10	18000	1
Mitsubishi	MXZ4B36NA	18		9	35400	1

Note: In the above table, not all cells are filled. Not all heat pump models had complete information that were available at the time of calculations.

In many calculations, the SEER number was utilized. For the purposes of this program, the HSPF value was used as the main multiplier. The SEER number measures the cooling capacity of an appliance during the hot season. This number is not an accurate number to use for Sitka's cooler climate since it is probably safe to assume many residents do not typically use

their heat pump to cool their house. However, the HSPF number makes more sense for our area because it measures the heating performance of a heat pump. Looking at the numbers, using the HSPF would make more sense for Sitka. In general, it takes less energy for a heat pump to produce heat than it does to produce cool air. The following table shows the amount of savings for each heat pump compared to the estimated baseline value of 525 kWh.

Table 6.

Brand	Model Name	HSPF (Btu/Wh)	Capacity (Btu/h)	Total Purchased Heat Pumps	Annual kWh value calculated with HSPF	Monthly Usage in kWh	Price per monthly usage	Total Cost per year with total number of pumps	Difference in Monthly Usage In kWh	Savings per month	Total Savings per year with total number of pumps
Fujitsu	ASU15RLS2 AOU15RLS2	14.01	14500	26	1.03	129.37	$14.40	$4,492.52	395.63	$44.03	$1,144.87
Fujitsu	ASU9RLS2 AOU9RLS2	13.98	9000	3	0.64	80.47	$8.96	$322.44	444.53	$49.48	$148.43
Fujitsu	AOU18RLXFW ASU18RLF	10	18000	1	1.80	225.00	$25.04	$300.51	300.00	$33.39	$33.39
Fujitsu	AOU24RLXFW ASU24RLF	10	22000	3	2.20	275.00	$30.61	$1,101.87	250.00	$27.83	$83.48
LG	LMCN185HV	9.1	18000	1	1.98	247.25	$27.52	$330.23	277.75	$30.91	$30.91
LG	LMU369HV	10.5	34000	1	3.24	404.76	$45.05	$540.60	120.24	$13.38	$13.38
LG	LMCN125HV	10	12000	1	1.20	150.00	$16.70	$200.34	375.00	$41.74	$41.74
LG	LMN096HVT	10	9000	1	0.90	112.50	$12.52	$150.26	412.50	$45.91	$45.91
Mitsubishi	MSZGE18NA	10.00	17200	4	1.72	215.00	$23.93	$1,148.62	310.00	$34.50	$138.01
Mitsubishi	MUZGE18NA	10.00	17200	2	1.72	215.00	$23.93	$574.31	310.00	$34.50	$69.01
Mitsubishi	MUZFE12NA1 MSZFE12NA	10.6	12000	1	1.13	141.51	$15.75	$189.00	383.49	$42.68	$42.68
Mitsubishi	MSZGE06NA	10	6000	1	0.60	75.00	$8.35	$100.17	450.00	$50.09	$50.09
Mitsubishi	MSZGE09NA	10	10900	1	1.09	136.25	$15.16	$181.98	388.75	$43.27	$43.27
Mitsubishi	MSZGE15NA	10	18000	1	1.80	225.00	$25.04	$300.51	300.00	$33.39	$33.39

Total Savings per year = $1922.26

Total Savings per year = 4751.22 kWh

In summary, all the calculated savings are mere estimated calculations from this program. In total, Sitka is saving approximately 34,383.59 kWh of electricity and saving $3,826.89. Naturally, individual results will vary from this program, but participants should see a slight difference in their utility bills each month.

PROGRAM FEEDBACK

The feedback for the program has been extremely positive. Some participants suggested that more appliances should be added or allow newly built homes to be part of the program, but that is not the intention of this program. The intent is for homeowners of already existing homes who may need some assistance to become more energy efficient. The purpose of limiting the amount of appliances available is to reduce the chance of liability within the program.

Some folks were also disappointed to get rid of a perfectly good appliance since one of the rules for the Energy Star Rebate program is to take the old appliance to the Sawmill Cove Recycling Center/Scrap Yard and produce a receipt. However, some folks were still able to follow this rule, but did so in a way where a more inefficient appliance was taken off the grid. For example, some applicants gave their older appliance to somebody who is in need of a better appliance and took their older appliance out to the scrapyard. Another way to get rid of a decent appliance is to ship it to another community for someone else to use. Many folks checked in with Electric Department staff before going ahead with a different disposal method other than what was stated in the rules. That way, their application was not rejected if the form of disposal was not appropriate with the goals of the program. The end goal was to dispose of a less energy efficient appliance with a more efficent one.

Overall, participants and the community appeared to be satisfied and supportive of this program.

CONCLUSION

In conclusion, not only was this program successful for the community, but it was also successful for the utility in order to reduce overall demand on electrical generators. Many

applicants made their purchases from local vendors or utilized local laborers to install various appliances, so this program helped to keep funds within the community.

The main advantage to this program is how much the community is saving in electricity and money. With a savings of 34,383.59 kWh, a savings of approximately 23 households, the community can rest assured this program made an impact on the demand side of operations. However, this does not mean a person should turn on every light in their house or stop conserving electricity, it just means the chances of paying higher costs in electricity because of diesel generation is decreased. The Electric Department would like to keep the margin between supply and demand high just in case something were to happen within the system. We will still have some wiggle room to work. It is probably safe to say nobody wants a repeat of October 2010 when the City lost the power line to the hydro plants and rolling blackouts were the only resort to provide electricity to the community.

ACKNOWLEDGEMENTS

Many notes of appreciation are in order for the success of this program. The community should thank the City Assembly for approving this program. Without their approval, nobody would be getting any rebates for being more energy conscious and lessening the generation load on the system. The collaborative efforts of Bitty Balducci and Chris Brewton need to be applauded because without their eyes on the prize, this program would never have been developed. A special thanks needs to go to other City Departments, Finance and Public Works, for working with the Electric Department in order to answer questions from the community, get the rebate checks out to the customer in a timely matter, and to properly dispose of their inefficient appliance. Thank you to Juliet Agne in the Electric Department, for tracking all applications and funds, as well as compiling data to observe the success of the program. And last, but not least, thank you to the community of Sitka for utilizing this program and providing feedback to help improve the program for other utilities or to use in the future. Without the collaborative efforts of everyone mentioned, this program would not be possible or as successful.