STATE OF ALASKA
ALASKA CLEAN/DRINKING WATER FUND
GREEN PROJECT ASSESSMENT FORM

Division of Water
MG&L
MAY 1 2 2012
Received

As applicable under the EPA annual capitalization grants provided to the Alaska Clean Water Fund (ACWF) and Alaska Drinking Water Fund (ADWF) loan programs, a portion of funds appropriated shall be for projects to address green infrastructure, water or energy efficiency improvements or other environmentally innovative activities." To meet this condition under the federal grant for administering these funds, this assessment form is provided to document this eligibility or what is termed a "Categorical" or "Business Case" justification, which will be reviewed by DEC for provisional compliance. For more information on green infrastructure development, please review the following EPA web site:

http://cfpub.epa.gov/npdes/home.cfm?program_id=298

For those projects requiring a "Business Case," Part 2 will require completion to qualify a "traditional project" as green; justification is broken down into two parts, technical and financial. The technical part should use information from a variety of sources such as maintenance or operation records, engineering studies, project plans or other applicable documentation to identify problems (including any data on water and/or energy inefficiencies) in the existing facility, and that clarifies the technical benefits from the project in water and/or energy efficiency terms. Financial justification needs to show estimated savings to a project based on the technical benefits, and demonstrate that the green component of the project provides a substantial savings and environmental benefit.

For more information and assistance in completing this assessment form, please contact the Municipal Matching Grants & Loans program in Anchorage at 907-269-7673, or in Juneau at 907-465-5300.

GENERAL INFORMATION

Name of Community Anchorage

Address Anchorage Water & Wastewater Utility Engineering Division
3000 Arctic Boulevard Anchoraeg, AK 99503

Contact Name Steve Nuss, PE Title CPM Manager Telephone (907) 564-2763

PROJECT INFORMATION

Project Name 3000 Arctic HVAC Upgrade Location 3000 Arctic Blvd, Anchorage

Project Type: _____ New Construction X Upgrades

_____ Stormwater Infrastructure X Energy Efficiency Project

_____ Water Efficiency Project _____ Innovative Environmental Project

Green Project Description: This project provides upgrades to the HVAC system at the AWWU Headquarters Building, 3000 Arctic Boulvard, thatresolves deficiencies in the outdated system with limited functionality and obsolete controls.

PART 1 – GREEN PROJECT CATEGORY & COSTS

Identify the most appropriate "Green" Clean Water or Drinking Water category project type. Note, any selection with (BC) at the end will require a Business Case demonstration.

ENERGY EFFICIENCY – the use of improved technologies and practices to reduce the energy consumption of water quality projects.

_____ Wastewater/water utility energy audits _____ Clean power for public owned facilities

_____ Leak detection equipment _____ Retrofits/upgrades to pumps & treatment processes (BC)

_____ Replace/rehabilitation of distribution (BC) X Other: Building Control Improvements (BC)

WATER EFFICIENCY – the use of improved technologies and practices to deliver equal or better services with less water.

_____ Water meters _____ Fixture Retrofit _____ Landscape/Irrigation

_____ Graywater or other water recycling _____ Replace/rehabilitation of distribution (BC)

_____ Leak detection equipment _____ OTHER: _____ (BC)

GREEN INFRASTRUCTURE – Practices that manage and treat stormwater and that maintain and restore natural hydrology by infiltrating, evapotranspiring and capturing and using stormwater.

_____ Green Streets _____ Water harvesting and reuse

_____ Porous pavement, bioretention, trees, green roofs, water gardens, constructed wetlands

_____ Hydromodification for riparian buffers, floodplains, and wetlands

_____ Downspout disconnection to remove stormwater from combined sewers and storm sewers

_____ OTHER: _____ (BC)

ENVIRONMENTALLY INNOVATIVE PROJECTS – Demonstrate new/innovative approaches to managing water resources in a more sustainable way. This may include projects that achieve pollution prevention or pollutant removal with reduced costs and projects that foster adaptation of water protection programs and practices to climate change.

_____ Wetland restoration _____ Decentralized wastewater treatment solutions

_____ Water reuse _____ Green stormwater infrastructure _____ Water balance approaches

_____ Adaptation to climate change _____ Integrated water resource management

_____ OTHER: _____ (BC)

PROJECT & GREEN COMPONENT COSTS

	TOTAL PROJECT COSTS	TOTAL "GREEN" COMPONENT COSTS
Administration	$ 0.00	$
Legal	$ 0.00	$
Preliminary Studies/Reports	$ 0.00	$
Engineering Design	$ 135,105.61	$ 135,105.61
Inspection/Surveying/Construction Management	$ 100,802.29	$ 100,802.29
Construction	$ 870,290.00	$ 870,290.00
Equipment	$ 0.00	$
Contingencies	$ 0.00	$
Other Overhead/DAC	$ 73,629.75	$ 73,629.75
Total Costs	$ 1,179,827.65	$ 1,179,827.65

PART 2 – PROJECT "BUSINESS CASE" TECHNICAL/FINANCIAL ASSESSMENT

TECHNICAL ANALYSIS OF BENEFITS*

In addition to this form, a supporting technical and financial analysis is required to verify energy and water saving efficiencies for any green component of the project. For green infrastructure and innovative environmental type projects, the analysis should include any applicable efficiency and environmental benefits. For assisting MGL in evaluating "Business Case" assessments of water main, meter, and pump facility replacement type projects, the attached form titled "ADWF - Water/Energy Efficiency Determination - Water Main Replacement/Meter/Pump Facility" is required to be completed. Once the form is complete along with any supporting documentation, please submit documentation to the MGL program for review and concurrence. Note, only water/energy efficiencies that achieve a 20% or greater increase in efficiency will categorically qualify as a Green project.

CERTIFICATION STATEMENT:

I certify the above information is current and accurate.

Stephen Noss
Name

Capital Program Manager
Title

Signature

5/9/12
Date

Submit Completed Form to:

Alaska Department of Environmental Conservation
Municipal Matching Grants & Loans
555 Cordova Street
Anchorage, AK 99501-2617

Anchorage Water & Wastewater Utility

Engineering Division

Mayor
Dan Sullivan

Board Chair
Timothy M. Sullivan, Sr.

March 7, 2013

Mr. Mike Lewis, P.E., Program Manager
Alaska Department of Environmental Conservation
Municipal Matching Grants & Loans
555 Cordova Street
Anchorage, Alaska 99501-2617

RE: ADWF Loan No. 130441 – 3000 Arctic HVAC Upgrade Project
Green Project Assessment Follow-Up Information

Dear Mr. Lewis:

This letter serves as response to ADEC's request for additional information regarding the post construction performance of the 3000 Arctic Boulevard HVAC Upgrade Project. The letter provides technical and financial backup in support of this project for consideration as being energy efficient in accordance with the Green Project Assessment form submitted to ADEC in 2012.

AWWU constructed this project in an effort to provide better energy efficiency in the heating and cooling of its 3000 Arctic Boulevard headquarters building. This project replaced outdated controls systems, made improvements to duct work to improve air movement in locations impacted by previous remodels, and made other system improvements to increase air changes in the building to industry standards. This project was completed in 2010 and we have evaluated the energy usage, both electricity and natural gas, from before and after project completion. The attached graphs show the yearly utility usage at the facility.

Based upon the usage data taken from our utility bills, AWWU has been able to drop its electrical usage from 1,071,520 kwh in 2010 to 850,320 in 2012. This has been a 20% savings in electricity and represents an approximate cost savings of $21,898 for 2012 (based upon an average kwh rate of 9.9 cents). This is just for the 2012 electrical savings and does not represent savings achieved in 2011 that are estimated at $14,398. For gas, we saw a decrease in usage from 24,594 to 18,848 ccf between 2010 and 2012. This reflects a 24% decrease in gas usage and an estimated annual saving s of $4,424 (based upon a 77 cent per ccf average cost). Gas savings in 2011 were negligible and could be reflective of a

colder than normal winter. Total savings over the two year observation period are $40,720 or approximately 3.5% of the total project cost.

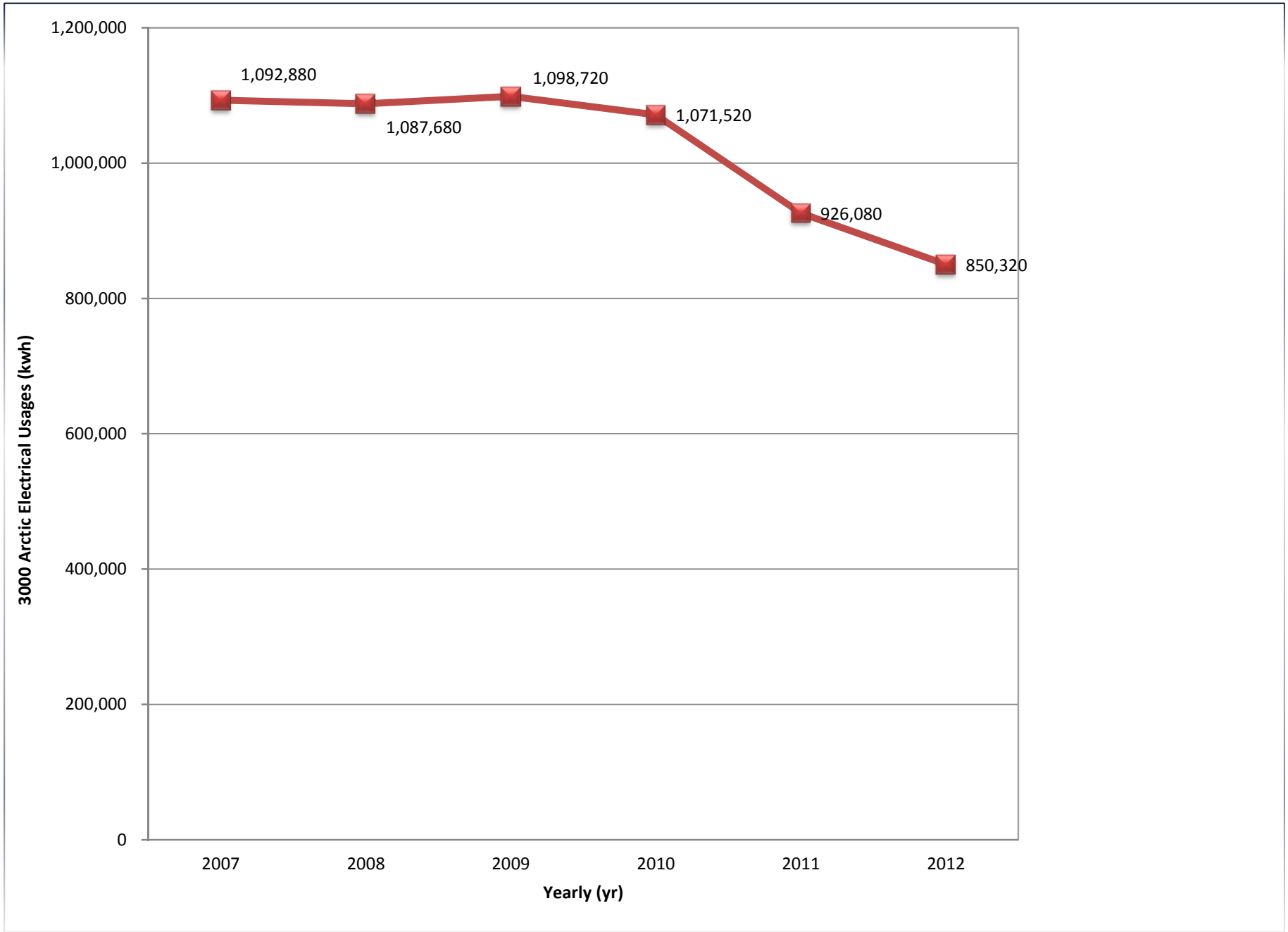
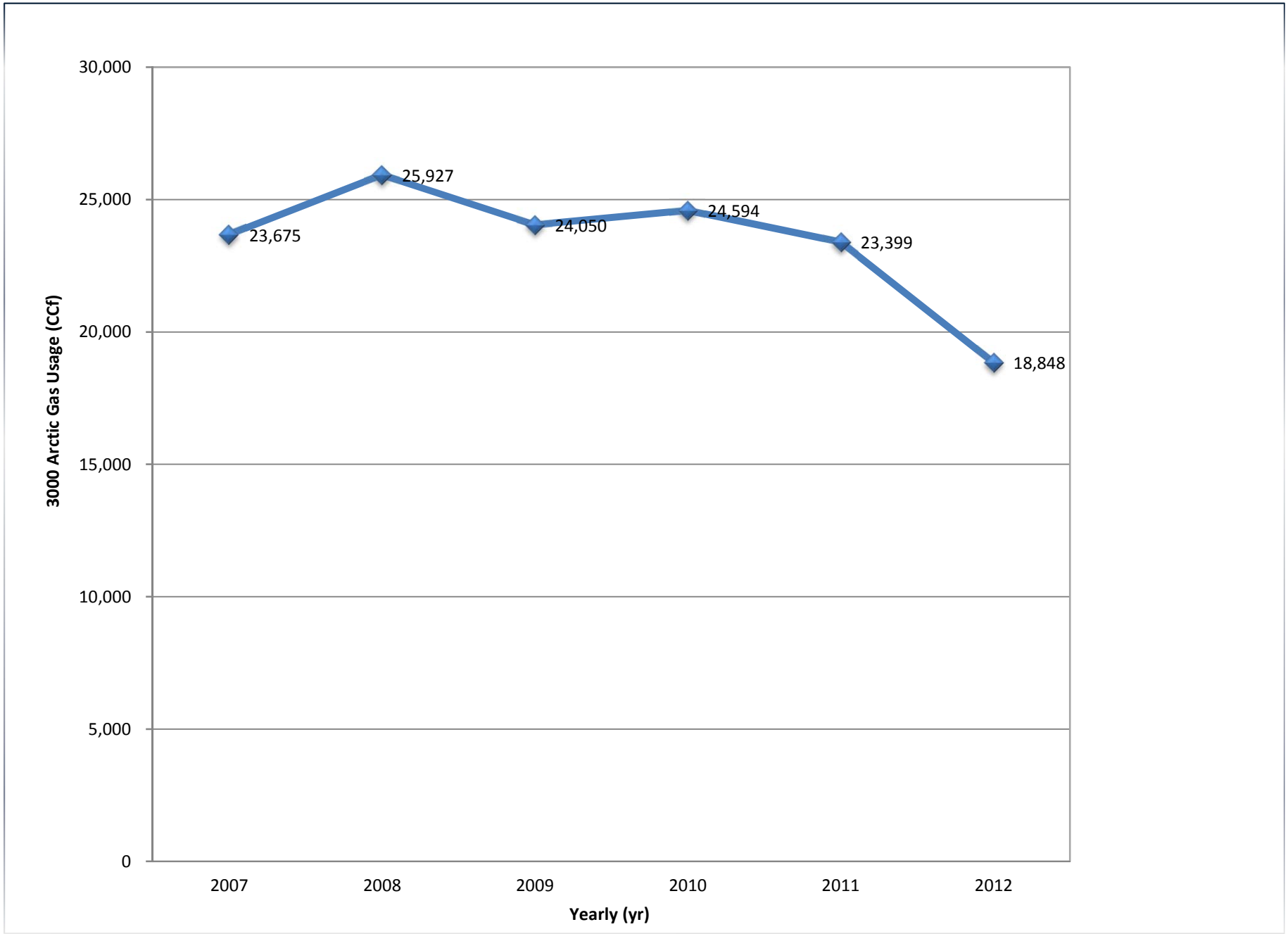
AWWU believes this data and the cost savings show that the project has had significant energy savings for the facility, and we believe the facility will continue to show a reduced energy consumption level.

If you have any questions, or need further information, please feel free to contact me at 564-2763.

Respectfully,

Stephen Nuss, P.E.
Capital Program Manager

AWWU Electricity Usage 2007-2012
3000 Arctic Blvd.



AWWU Gas Usage 2007-2012
3000 Arctic Blvd.