



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

Division of Water
MG&L

MAY 12 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 Anchorage, AK 99503

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

PROJECT INFORMATION

Project Name SCWTF Roof Upgrade Location Section 7, T13N, R2W, Lot 9 - SCWTF

Project Type: New Construction Upgrades

Stormwater Infrastructure Energy Efficiency Project

Water Efficiency Project Innovative Environmental Project

Green Project Description: This project will replace the roof at the Ship Creek Water Treatment Facility to prevent damage to equipment and processes in the area of the sedimentation basins.

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) Other: Building Envelope 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

	<u>TOTAL PROJECT COSTS</u>	<u>TOTAL "GREEN" COMPONENT COSTS</u>
Administration	\$ 0.00	\$
Legal	\$ 0.00	\$
Preliminary Studies/Reports	\$ 0.00	\$
Engineering Design	\$ 125,040.92	\$ 30,010.00
Inspection/Surveying/Construction Management	\$ 162,087.44	\$ 38,900.00
Construction	\$ 1,055,512.22	\$ 257,302.00
Equipment	\$ 0.00	\$
Contingencies	\$ 0.00	\$
Other Overhead/DAC	\$ 102,245.56	\$ 24,539.00
Total Costs	\$ 1,444,886.14	\$ 350,751.00

Only includes insulation and vapor barrier work.

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 DUSS
Name

Capital Program Manager
Title

Stephen Duss
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



Mayor
Dan Sullivan

Anchorage Water & Wastewater Utility

Engineering Division



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. 131281 – SCWTF Roof Upgrade
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 Ship Creek Water Treatment Facility Roof 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 to replace the failed roofing system and to increase insulating quality of the building envelope. The portion of roof replaced was over the basins and had experienced several leaks as well as glaciation on the ceilings as a result of condensation during the winter months. The new roofing system took the roof from an estimated R-4 value to at least an R-30 value. Since the project was completed, the basin ceilings have not experienced the glaciation from condensation. This project was substantially complete in late fall 2010 and we have evaluated the natural gas usage, from before and after project completion. The attached graph shows the yearly gas usage at the facility. Electrical usage was not evaluated because it does not play a key roll in the heating of the facility.

Based upon the usage data taken from our utility bills, AWWU has been able to drop its gas consumption from 44,763 ccf in 2009 to 34,816 ccf in 2012. The 2012 gas consumption is consistent with both 2010 and 2011 levels, indicating a sustained, long term energy savings from the project. Overall, the energy saved in gas consumption over the three years is estimated at 7600 ccf per year, or an estimated yearly savings of \$5850 (based upon an average cost of 77 cents per ccf).

Anchorage Water & Wastewater Utility  Clearly

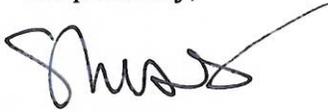
3000 Arctic Boulevard • Anchorage, Alaska 99503
Phone 907-564-2774 • Fax 907-562-0824 • www.awwu.biz



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 Gas Usage 2007-2012
Ship Creek Water Treatment Facility

