

Steve Goodkind, P.E.  
Public Works Director

Laurie Adams  
Assistant Director



P.O. Box 878  
Burlington, VT 05402

(802) 863-4501 P  
(802) 864-8233 F

## MEMO

To: Board of Finance  
From: Laurie Adams, Assistant Director DPW Water Quality  
Date: November 16, 2012

Re: Request for Permission to Apply for State of VT Construction Loan & VT Bond Bank Financing

Under the State of Vermont Water Supply Drinking Water Revolving Loan Program, the Water Division applied for and was awarded eligibility for the replacement of a 500 HP finished water pump with smaller 400 HP, high efficiency, VFD (variable frequency drive) controlled pump. This new pump is expected to save 32% in annual energy costs and correspondingly a 32% reduction in greenhouse gases compared to the finished water pump it replaces.

The total project cost is estimated at \$260,351. Given that this project is an energy efficiency improvement, BED has calculated a rebate to the Water Division of \$46,181 reducing our cost to \$214,170. Our project falls under the 2010 State of VT Capitalization Grant providing an additional principal loan forgiveness of 10%. This 10% is calculated off the net \$214,170 estimated to provide an initial principal reduction of \$21,417.

Our eligibility fell under what they term the Green Project Reserve. Our project was classified as environmentally innovative. The term is 20 years at 3%. **Our request at this time is for the authorization to complete the Construction Loan Application for Drinking Water Revolving Loan Funds 24 V.S.A. Chapter 120 and apply to the Vermont Municipal Bond Bank for our borrowing.**

Our goal is to have this new pump installed before next summer when water production typically increases. The principal and interest cost would be factored into the FY14 Water Division budget.

**Vermont Department of Environmental Conservation  
Drinking Water and Groundwater Protection Division**

Old Pantry Building [phone] 802-241-3400  
103 South Main Street [in-state] 800-823-6500  
Waterbury, VT 05671-0403 [fax] 802-241-3284  
[www.vermontdrinkingwater.org](http://www.vermontdrinkingwater.org)

*Agency of Natural Resources*

June 22, 2012

LAUREL C ADAMS  
BURLINGTON PUBLIC WORKS WATER  
PO BOX 878  
BURLINGTON VT 05402

Re: Fiscal Year 2011 DWSRF Funding for Water System Improvements, Burlington Water Resources, WSID #5053.

Dear Laurie:

The Drinking Water State Revolving Fund (DWSRF) Program is pleased to notify Burlington Water Resources that the finished water pump replacement project is ranked within the fundable range on the 2011 DWSRF Green Project Reserve Priority List. All projects on the 2011 Priority List will qualify for some principal forgiveness, regardless of disadvantaged status. We are awaiting the grant award from EPA and anticipate funding for your project to become available by mid-July of 2012. The project is described as the following:

Installation of a new speed controlled high efficiency finished water pump to replace the existing inoperable 500 hp finished water pump.

Projects with funds available are required to submit for approval the enclosed project timeline. Failure to complete an action item by the approved project timeline date may result in the project being dropped from the list in order to fund projects that are ready to proceed. **Please complete the enclosed project timeline by August 31, 2012.** The City will also need to complete and submit the Final Design and Construction Loan Application. Please file your loan application as soon as possible once you have obtained local authorization to incur debt but no later than September 30, 2012.

In addition to submitting a project timeline and loan application the City will also need to complete the following unchecked items to secure DWSRF money.

- ✓ **Green Project Reserve Business Case** – The Division has reviewed the information regarding the electrical efficiency of the new pump and concurs with the projection that the City will realize a 32% savings in annual energy costs when compared to the existing pump it will replace. Based on this analysis the Division hereby approves the business case for this project.
- **Environmental Review** – Complete an Environmental Report Form (see enclosure) and submit the form and all applicable attachments to this office. Please note if improvements are completely contained to the existing footprint of the facility the environmental review can be waived with proper certification that the project meets the criteria.
- **Archeological Review** – Submit a detailed project description, overall project site plan and an orthophoto (if available) to Ashley Lucht, our capacity development specialist, to determine if the project will require an Archeological Resources Assessment (ARA). If an ARA is required, it may be completed free of charge by the University of Vermont Consulting Archaeology Program under a state contract set up specifically to facilitate the release of DWSRF money. For more information please contact Ashley Lucht, our capacity development specialist, at (802) 338-4818 or by email [ashley.lucht@state.vt.us](mailto:ashley.lucht@state.vt.us).

- ❑ **Final Design Plans and an Application for a Permit-to-Construct** – A Permit-to-Construct Application has not yet been received for this project. Once your engineering consultant submits final design plans and an application our engineers will fully review them and issue the permit when approvable.
- ❑ **Project Cost Summary** – The most up-to-date project cost summary should be prepared and submitted directly to this office.
- ❑ **Voter Approval** – The DWSRF has not received a copy of the legal warning, article, recorded vote, clerk certification, and bond counsel opinion letter for voter authorization of water system improvements as of the issuance date of this letter. In general, voter approval will need to be in place by March 31, 2013 or project funds could be bypassed.
- ❑ **Capacity Evaluation** – All water systems receiving funds through the DWSRF must have a Capacity Development Survey completed by Ashley Lucht. Ashley will discuss and offer recommendations on technical, managerial, and financial capacity.
- ❑ **VMBB Loan Application** – Since the project is expected to be over \$100,000, the City must also, if it hasn't already, request from and submit a bond application to the Vermont Municipal Bond Bank (VMBB). Robert Giroux of VMBB may be contacted at (802) 654-7377.
- ❑ **Bid Advertisement for Contractors** – Be careful to meet all bid procurement guidelines for DWSRF funding including Davis Bacon provisions. For more information on procurement guidelines, please contact Allyn Lewis of DEC's Facilities Engineering Division at (802) 654-8989.

If the City intends on submitting either the project timeline or application but cannot have it completed by the dates listed above please contact me immediately. Additionally please contact me if you have any questions or I can be of any assistance. I can be reached on my direct line at (802) 654-8969.

Sincerely,



Bryan J. Redmond  
DWSRF Program Specialist

- cc: Eric Blatt, P.E., Drinking Water and Groundwater Protection Division, DEC (via e-mail)  
 Greg Bostock, P.E., Drinking Water and Groundwater Protection Division, DEC (via e-mail)  
 Allyn Lewis, P.E., Facilities Engineering Division, DEC (via e-mail)  
 Ashley Lucht, Drinking Water and Groundwater Protection Division, DEC (via e-mail)  
 Tim Raymond, Drinking Water and Groundwater Protection Division, DEC (via e-mail)  
 Robert Giroux, Executive Director, Vermont Municipal Bond Bank (via e-mail)  
 Steve Roy, P.E., City Engineer (via e-mail)
- enc: DWSRF Project Timeline (via e-mail)  
 Environmental Report Template (via e-mail)  
 Municipal Final Design and Construction Application (via e-mail)

**Burlington Electric Department**  
**PRELIMINARY ESTIMATES OF SAVINGS**  
**AND FINANCIAL INCENTIVES**  
**Lake St. Water Plant**  
**Energy Efficiency Measures Summary**

Existing Building Retrofit

12/20/2011

LOC ID # 48777

Prepared by: BED Energy Services Staff

EEM								
#	Measure Description	Total Project Cost	Est Annual kWh Savings	KW Savings	Annual Electrical Oper Cost. Savings	BED Incentive	Simple Payback (yrs)	
1	Water Pump Replacement of Unit F2 - Gould Pump Model 3410 with added VFD Control	\$260,351	131,945	0.0	\$16,731	\$46,181	12.8	Efficient Motor
	<b>Total of Implemented Measures</b>	<b>\$260,351</b>	<b>131,945</b>	<b>0.0</b>	<b>\$16,731</b>	<b>\$46,181</b>	<b>12.8</b>	

NOTES:

- (1) Project cost per spreadsheet supplied by the Water Plant Engineering.
- (2) Project Savings are estimated, with calculations completed by DPW Engineering using pump curves. Pre and Post-project logging will be used to verify actual project savings.
- (3) Incremental cost of efficiency portion of project includes addition of 480v VFD and Harmonic filter. Incremental cost is calculated at \$57,520
- (4) Cost of efficient Gould pump is approximately equal to the cost of a standard Fairbanks-Morse Pump