

OHIO ENVIRONMENTAL PROTECTION AGENCY
DRINKING WATER STATE REVOLVING FUND (DWSRF)
AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009 (ARRA)
GREEN PROJECT INFORMATION

FFY 2009 ARRA GREEN PROJECT INFORMATION FORM

The Federal American Recovery and Reinvestment Act of 2009 (ARRA) requires a minimum amount of funding be used toward Green Infrastructure, Energy Efficiency, Water Efficiency, or other Environmentally Innovative activity. To ensure that this requirement is met, Ohio EPA is requiring ARRA recipients to provide additional information about potential green components of their project(s).

In many instances, a Business Case is required for justification to consider an item or activity "green". The US Environmental Protection Agency (EPA) has provided guidance for help in evaluating the green elements of a project. Please complete this cover sheet and appropriate page(s), as noted below for each project that will incorporate a "green" component(s). More guidance is provided on the back of each form.

PWS Name: City of Sidney PWSID: 7501214

Project Name: Water Meter Auto Read Project PPL #: 56
(as assigned by OEPA- refer to project list on web)

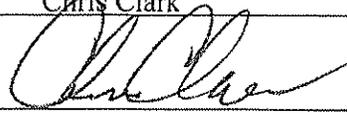
Total Estimated Project Cost: \$ 1,675,190 Total Est. Green Amount: \$ 1,675,190

Type of "Green" Element(s) included in this project. For each box that is checked the corresponding page of this form must be completed and submitted with this cover page. Attach additional pages as necessary:

- Green Infrastructure** (porous pavement, bioretention, trees, green roofs, and other practices that mimic natural hydrology and reduce effective imperviousness)
- Energy Efficiency** (energy audit, water pump system improvements or replacements, variable frequency drives, SCADA, on-site clean power, solids treatment or handling, replacement or rehabilitation of distribution lines)
- Water Efficiency** (water meter installation or replacement, leak detection equipment, water line replacement, water audit, water efficient fixtures)
- Other Environmentally Innovative Activity**

Completed by:

Name: Chris Clark Title: Utilities Director
(please print)

Signature:  Date: October 11, 2009

For additional ARRA information, go to the DPH-Drinking Water Section website: www.ct.gov/dph/publicdrinkingwater

For OEPA use only:
Project #: FS390854-0004 DWSRF # PPL # 31 - # 56

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WATER EFFICIENCY: (W) (i.e. water main replacement, meter installation, leak detection equipment, water efficient features)

PWS Name: City of Sidney PWSID: 7501214

Project Name: Water Meter Auto Read Project PPL #: 56

Total Est. Project Cost: 1,675,190 Total Est. Green Reserve Amount: 1,675,190

Project Summary: Installation of radio reads on all water meters in the City; installation of central data relay hubs for the transmittance of the radio reads to the City's Utility Billing Office. Will allow for real time readings - reduce water loss through early detection.

Water Main Replacement

Water main material/length to be replaced?	N/A
Est. total system water lost due to breaks and leaks	2005 Loss = 18%; 2008 Loss = 7.5%
Est. water loss from pipe being replaced	N/A
Total annual production	1,189,322,000 total = 3.26 MGD
Number of breaks recorded in past 24 months for the area to be replaced?	
Est. Annual water savings	
Est. annual costs savings	
Other efficiencies to be gained by the replacement? (i.e. reduced head and therefore less energy loss in an upstream pump station, etc.)	

Meter Installation/Replacement

Original Installation Replacement

Reason for replacement?	Reduce Water Loss
Est. annual water savings	\$75,000/yr in Water Savings
Est annual costs savings	\$175,000/yr in savings through personnel attrition

Business Case Narrative (Calculate water saving improvements and costs savings) :

Over the past three years, Sidney City staff has investigated the possibility of going to a radio read automation system throughout the City. Over the past 12-18 months -- surrounding communities such as Troy, Tipp City, Springboro and Middleton have completed or are in the process of converting all of their meters to radio reads as way to control costs. The new automated meter reading system is becoming the standard across Ohio and the nation.

The Sidney Water Meter Auto Read Project is a project that involves the automation of the reading of water meters throughout the City. Every water meter in the City will be equipped with a radio transmitting unit that relays the hourly/daily/monthly water consumption readings to several antennas located throughout the City. These readings are then transmitted from the antennas to the City's Utility Billing Office.

Sidney's project involves the replacement of 1,500 old residential meters; the installation of with new Pro-Read meters with radio units; the installation over 8,000 radio units on existing water meters; the installation of four data collectors (on local towers) that collects all of the meter reading signals and transmits the data to the City's Utility Billing Office and the installation of computer servers and the software.

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The ultimate goal is for the metering and billing system to become more customer friendly. The new Auto Read System has the capability (with web interface software) for every customer to be able to monitor their water meter and consumption as often as they desire. This software also generates a report to Utility Billing whenever it detects a leak (abnormal usage) which helps control water loss.

There are numerous benefits to this project including:

1. Reduction of Personnel – The City of Sidney already has eliminated two water meter reading positions through attrition as a result of the automation of the meter reading project. This results in an annual savings of \$150,000+ annually for residents of the City.
2. Water Loss – Sidney’s water distribution system on the average experiences losses between 7% to 18% water loss in the system due to undetectable leaks. The only way to calculate the water loss is at the end of the quarter or at the end of the year when all of the metering usage has been totaled. The Water Meter Auto Read Project will allow City staff to monitor for water loss on a daily, weekly and monthly basis and will assist staff in pinpoint areas of leaks.

This will not only help the City government in reducing the water loss but will also be able to assist the customers as well. The ultimate goal is to allow each customer to access their water usage and water meter online. Customers will be able to see their normal water consumption and when their readings start to increase – it is usually an indication of a leak in their water line. The new system will be able to flag those water meters with high usage and allow City staff to make contact with the customer to address the potential leak.

3. Billing Efficiency – The whole process streamline the meter reading and billing process and should enhance customer convenience.

The total cost of the new Water Meter Auto Read Project is \$1,645,000. The project is funded by a 40% grant and a 60% interest free loan from the American Recovery and Reinvestment Act. The project has been awarded to Neptune Equipment Company and U.S. Bronco Services. The project will take 12 months to complete. Since the loan portion of the project will be funded by water revenues – no resident or customer will receive a bill for this work.

COST SAVINGS

GOAL: 5% REDUCTION IN WATER LOSS

\$1,500,000 Water Plant Production Costs x 5% = \$75,000 annual savings
Elimination of two Water Meter Readers through attrition = \$175,000 annual savings

TOTAL SAVINGS = \$250,000 ANNUALLY

Attached Supporting Documentation

- | | |
|---|---|
| <input type="checkbox"/> Engineering Project Planning Documents | <input type="checkbox"/> Water/Energy Efficiency Determination (OEPA) |
| <input type="checkbox"/> Public Water System Records | <input checked="" type="checkbox"/> Other: <u>Water Loss Reports</u> |