

## **Green Reserve Business Case for Greenacres County Water and Sewer District Water System Improvements Project**

### **Green Reserve Project Type**

The Greenacres County Water and Sewer District Water System Improvements Project is a water use and energy efficiency project. Included are the installation of 85 residential water meters, the replacement of ten inoperative and/or leaking mainline gate valves, and the replacement of an existing wellhouse with a new, energy-efficient wellhouse.

### **Documents Submitted and Reviewed by the State**

This narrative is based on information contained in the April, 2008 Water System Preliminary Engineering Report prepared for Greenacres County Water and Sewer District by NCI Engineering.

### **Eligible Green Project Reserve Components**

A portion of this project is for the installation of water meters at 85 residential service connections. The cost associated with this portion of the project is \$191,990, or 35.3% of the \$544,514 total cost of the project. The cost for replacement of the pumphouse is approximately \$15,000, or 2.8% of the total cost of the project. The total project cost eligible for Green project Reserve is \$206,990.

### **Green Reserve Project-Categorical Project**

As defined by USEPA, the water meter portion of this project, representing 35.3% of the total project cost, is categorically green.

### **Green Reserve Project-Business Case Evaluation**

As stated in the USEPA March 2, 2009 memorandum, for traditional projects that are not categorically green, in order for the project, or components of the project, to be counted towards the 20% requirement, the State project files must contain documentation that a clear business case for the project (or portion of the project) investment includes the achievement of identifiable and substantial benefits that qualify as Green Project benefits. The documentation should reference a preliminary engineering report or other planning document that clarifies the basis upon which the project (or portion of the project) was considered to have included identifiable and substantial benefits qualifying for the Green Project Reserve. The March 12, 2009 USEPA webcast slides 20 and 21

state that two components, the technical component and financial component, must be provided in the Business Case.

### **Green Reserve Project Type**

35.3% Water Efficiency; 2.8% Energy Efficiency.

### **Technical Component Evaluation**

Greenacres County Water and Sewer District provides water to 163 households. Of these, approximately 50% are metered. The average per capita use exceeds 300 gallons per capita day during the summer months. By metering the remainder of the households, it is estimated that this will be lowered to approximately 150 gallons per capita day. Additionally, electrical costs to heat the new wellhouse are estimated to be reduced by approximately 50%.

This project will result in annual water savings approaching nine million gallons. This is significant when considering the relatively small size of the system, 163 equivalent dwelling units and a population of approximately 465 people.

### **Financial Component Evaluation**

The Preliminary Engineering Report (PER) states that operation and maintenance (O&M) costs will be reduced substantially by replacing the leaking and inoperative valves associated with the system. The District has experienced three major leaks during the last three years. Each of these required system shutdowns and costly contracted services to repair. For a small system such as this, the elimination of repairs costing several thousand dollars annually is significant.

The energy cost savings estimate for this project is \$240 annually. Other O&M savings are estimated at \$3,200 annually. The total estimated savings in O&M is \$3,440 annually. Amortized over the estimated 30-year useful life of the system at an interest rate of 6%, this results in a present value for O&M savings of \$94,702, or 17.4% of the \$544,514 estimated cost of the project.

### **Green Reserve Project-Evaluation Conclusion**

It is the State's determination that 38.1% of this project will result in clear and substantial technical and financial benefits in accordance with USEPA guidance. \$207,460 constitutes the green portion of the project.

### **State's Contact Information**

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