PROJECT NAME: **City of Orem, Orem Water Reclamation Facility Expansion Project: UV Disinfection**

RECIPIENT: Orem City

LOCATION: Orem, UT

PURPOSE: The Orem Water Reclamation Facility project will, in an environmentally responsible manner, expand water treatment capacity and increase hydraulic capability. The UV disinfection component is critical to this project. Under current EPA guidelines, a Risk Management Plan (RMP) is required for the use of considerable quantities of chlorine, which is lethal in large doses and strictly managed by staff in accordance with the RMP. Through the implementation of the UV disinfection process, the surrounding neighborhood and business communities, city employees, and the natural ecosystem would benefit by eliminating the chlorine disinfection process. The City of Orem believes it is responsible, if not critical, to pursue this safe and environmentally friendly solution.

The Orem Water Reclamation Facility (OWRF) currently treats wastewater generated within a service boundary that includes the City of Orem, Lindon City, and a portion of the Town of Vineyard. In May 2009, the City of Orem hired a consulting engineering firm to design an expansion of this facility that would extend its treatment capabilities from a service population of 104,00 to 135,000. This expansion primarily addresses increasing biological demands, but also provides for an increase in hydraulic capacity.

Several “green” components have been included with this design. First, a biologic nutrient removal process was designed to reduce phosphorous and nitrogen below the anticipated Utah Pollution Discharge Elimination System (UPDES) permit requirements. Second, a newly-patented biosolids treatment process will be implemented to produce 100% Class ‘A’ biosolids, which will allow for an environmentally friendly reuse of this valuable product. Third, methane gas will be used in a heat exchange process to produce this Class ‘A’ product and excess gas could be used in a cogeneration process to produce electricity. Fourth, ultraviolet (UV) disinfection was designed into this project to eliminate hazardous chlorine chemicals used in the final treatment process.

The majority of the design will be implemented, but some key components were cut altogether due to a lack of funding. The most significant component in jeopardy of being cut is the UV disinfection process. Under current EPA guidelines, a Risk Management Plan (RMP) is required for the use of considerable quantities of chlorine, which is lethal in large doses and strictly managed by staff in accordance with the RMP. Through the implementation of the UV disinfection process, the surrounding neighborhood and business communities, city employees, and the natural ecosystem would benefit by eliminating the chlorine disinfection process. The City of Orem believes it is important to pursue this safe, environmentally friendly, and cost savings solution.

The project is “shovel-ready” and is currently ranked #3 on Utah’s state priority list.

Note: Please see Attached “Water Reclamation Facility General Plan/Flow Diagram” for technical detail.

AMOUNT: $707,300