

**Department: Regional Wastewater Reclamation****2010 Bond Election Proposed Projects****Priority: A****WW1 Project Name: Regional Optimization Master Plan- Ina Road Wastewater Reclamation Facility, Water Reclamation Campus, and the Plant Interconnect****Location:** Ina Road Wastewater Reclamation Facility (WRF): Ina Road and I-10; Water Reclamation Campus (WRC): Camino del Cerro and I-10; Plant Interconnect: Sweetwater Drive to Walker Road.

**Scope:** PCRWRD commissioned a Regional Optimization Master Plan (ROMP) study to determine the most viable and cost effective recommendations for the Department to meet Arizona Department of Environmental Quality's (ADEQ) permit standards for effluent nutrient and toxicity reduction at the existing Ina Road WRF and the proposed Water Reclamation Campus. These recommendations have been incorporated into a master plan, including the following projects:

**Ina Road WRF**

Modification of the existing 37.5 million gallon per day (mgd) treatment process to reduce nutrients and toxicity levels from the facility's effluent to comply with ADEQ permit standards using the Bardenpho process. Significant renovations and improvements will be required in association with the effluent nutrient reduction. Renovations and improvements include adding, modifying, and replacing and expanding various components in the existing treatment process, such as aeration tanks, secondary clarifiers, Supervisory Control and Data Acquisition (SCADA), High-Purity Oxygen System, Power Generation and Distribution Facilities, Biological Nutrient Removal Activated Sludge system, and an additional 12.5 mgd Bardenpho process treatment train.

In addition, these modifications and expansions will include extensive odor control and consolidation of bio-solids processing and disposal. Odor control includes treatment of odors from all process units for both newly constructed facilities and existing/retrofitted facilities. The bio-solids expansions will consist of digesters and associated equipment and processes, which will facilitate methane production to be used as a biofuel at the facility.

**Water Reclamation Campus**

An entirely new 32 mgd Water Reclamation Campus will be constructed to replace the aging Roger Road WRF to meet permit standards for effluent nutrient reduction. This Campus will also include state of the art odor control equipment, a Laboratory facility and facilities for the PCRWRD Compliance and Regulatory Affairs Staff. The laboratory facility will perform operational and compliance testing for the Ina Road WRF, the Water Reclamation Campus, Randolph Park WRF and various Sub-Regional Reclamation Facilities. The project also includes SCADA and the demolition of the existing Roger Road WRF.

**Plant Interconnect**

This project will construct approximately five miles of a gravity sewer and other system improvements needed to provide flexibility to treat wastewater flows either at the Water Reclamation Campus or at the Ina Road WRF. The Plant Interconnect will provide the ability to convey flow to the Water Reclamation Campus and the Ina Road WRF. The project includes odor control, SCADA, relocation of the existing sludge line between Roger Road WRF and Ina Road WRF, and fiber optic conduit.

**Project Management Jurisdiction:** Pima County Regional Wastewater Reclamation Department

**Benefits:** This project will allow the Department to meet ADEQ regulatory requirements for effluent nutrient reduction.

**Costs:** ROMP projects have a total estimated cost of \$720,000,000

**Bond Funding:** \$445,000,000

**Other Funding:** 2004 Bonds - \$28,804,674, WIFA Principal Forgiveness \$2,000,000, WIFA Loan \$8,000,000, Certificates of Participation, and future additional estimated bond funding to be requested in subsequent years.

**Fiscal Year Project Start and Finish Dates:**

Planning and Project Management: Water Reclamation Campus 2005 to 2015, Ina Road WRF Process and Capacity Improvements 2005 to 2014 and the Plant Interconnect 2005 to 2011;

Design: Ina Road WRF Process and Capacity Improvements 2008 to 2012, Water Reclamation Campus 2009 to 2012, and the Plant Interconnect 2005 to 2009;

Construction: Ina Road WRF Process and Capacity Improvements 2008 to 2014, Water Reclamation Campus 2009 to 2015, and the Plant Interconnect 2009 to 2011.

**Future Operating and Maintenance Costs:** Identified during the design and construction phases.

**Regional Benefits:** This project will enable PCRWRD to meet ADEQ regulatory requirements for effluent nutrient and toxicity reduction at Ina Road WRF and the Water Reclamation Campus.

**Supervisor District of Project Location:** District 3

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**For Internal Use only:** Specific County Administrator Contemporary Issue being addressed with expenditure:

**Department: Regional Wastewater Reclamation**

**2010 Bond Election Proposed Projects**

**Priority: A**

**WW4 Project Name: System-wide Sewer Conveyance Augmentation Program**

**Location:** This program will augment capacity in interceptors, trunk sewers and collector sewer systems in the Regional and Sub-Regional Pima County sewer conveyance systems.

**Scope:** The Department's Capacity, Management, Operation, and Maintenance (CMOM) Plan and Permit require that the capacity for a 10-Year/24-Hour Storm be available in the conveyance system to prevent Sanitary Sewer Overflows (SSO) into the environment. Additional pipe capacity is required to meet the current and future needs of the region. Utilizing the Department's hydraulic model, capacity will be augmented to alleviate constraints in the interceptor, trunk, and collector systems and associated siphons, manholes, junction structures, force mains, and pump stations. Additional future funding will be required to maintain CMOM requirements. Projects may include utility relocation, Supervisory Control and Data Acquisition enhancements and odor control as needed.

**Benefits:** Augment conveyance capacity to meet CMOM permit requirements and protect public health.

**Costs:** This program is estimated to exceed the \$35,000,000 in this bond request.

**Bond Funding:** \$35,000,000

**Other Funding:** Future Bond funding will be requested in subsequent years.

**Fiscal Year Project Start and Finish Date:** Design and construction dates for the individual projects will be set throughout the Bond period.

**Project Management Jurisdiction:** Pima County Regional Wastewater Reclamation Department

**Future Operating and Maintenance Costs:** Conveyance system preventive maintenance costs average \$800 per mile.

**Regional Benefits:** Augment conveyance capacity to meet CMOM permit requirements and protect public health.

**Supervisor District of Project Location:** All Districts

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For Internal Use only:

Specific County Administrator Contemporary Issue being addressed with expenditure:

**Department: Regional Wastewater Reclamation****2010 Bond Election Proposed Projects****Priority: A****WW8 Project Name: System-wide Sewer Conveyance Rehabilitation and Repair Program**

**Location:** The project will rehabilitate, repair and replace interceptors, trunk sewers, and collector sewer systems and pump stations in the Regional and Sub-Regional Pima County sewer conveyance systems.

**Scope:** In accordance with the Capacity, Management, Operation, and Maintenance (CMOM) permit issued by Arizona Department of Environmental Quality in November 2006, PCRWRD is implementing a program to rehabilitate/repair/replace the aging conveyance system throughout Pima County. PCRWRD estimates substantial rehabilitation needs will be required throughout the regional conveyance system over the next 20 years.

This funding will provide for the rehabilitation, repair and replacement of conveyance system elements and associated siphons, manholes, junction structures, force mains, and pump stations. Projects may also be for utility relocation, Supervisory Control and Data Acquisition (SCADA) and odor control as needed. The Department proactively inspects the sewer conveyance system. The condition assessment program uses both Closed Circuit TV (CCTV) and manhole inspection to identify locations within the sewer conveyance system in need of repair, rehabilitation or replacement. These projects are completed on a prioritized basis.

**Benefits:** Planned rehabilitation of the sewer conveyance system will reduce the possibility of potential failures and their associated liabilities, including environmental concerns and regulatory fines. Emergency repairs can be ten times the cost of planned repairs/rehabilitation.

**Costs:** This program is estimated to exceed the \$35,000,000 in this bond request.

**Bond Funding:** \$35,000,000

**Other Funding:** Future Bond funding will be requested in subsequent years.

**Fiscal Year Project Start and Finish Date:** Design and construction dates for the individual projects will be set throughout the Bond period.

**Project Management Jurisdiction:** Pima County Regional Wastewater Reclamation Department

**Future Operating and Maintenance Costs:** Conveyance system preventive maintenance costs average \$800 per mile.

**Regional Benefits:** Projects for system rehabilitation and repair are located throughout Pima County.

**Supervisor District of Project Location:** All Districts

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**For Internal Use only:**

Specific County Administrator Contemporary Issue being addressed with expenditure.

**Department: Regional Wastewater Reclamation**

**2010 Bond Election Proposed Projects**

**Priority: A**

**WW9 Project Name: Sub-Regional Wastewater Reclamation Facilities – Capacity, Rehabilitation, and Modernization**

**Location:** The program will impact current and future Wastewater Reclamation Facilities (WRF) throughout the Sub-Regional areas of Eastern Pima County, including Arivaca Junction WRF, Avra Valley WRF, Corona de Tucson WRF, Fairgrounds WRF, Green Valley WRF, Marana WRF, Mount Lemmon WRF, Rillito Vista WRF, and other future facilities such as those planned for Canoa Ranch and the Southlands area.

**Scope:** Provide for the standardization, modernization, rehabilitation, security, capacity expansions and establishment of treatment facilities for the Sub-Regional areas within Pima County.

**Benefits:** Provide safe and secure modern wastewater reclamation facilities incorporating Supervisory Control and Data Acquisition and odor control facilities to serve a growing population while maintaining compliance with current and future environmental regulations.

**Costs:** The cost of this program is anticipated to exceed the \$50,000,000 in this bond request.

**Bond Funding:** \$50,000,000

**Other Funding:** Future Bond funding will be requested in subsequent years.

**Fiscal Year Project Start and Finish Date:** Design and construction dates for the individual projects will be set throughout the Bond period.

**Project Management Jurisdiction:** Pima County Regional Wastewater Reclamation Department.

**Operating and Maintenance Costs:** Identified during the design and construction phases.

**Regional Benefits:** Projects for treatment capacity, rehabilitation, and modernization are located throughout Pima County.

**Supervisor District of Project Location:** All districts

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**For Internal Use only:**

Specific County Administrator Contemporary Issue being addressed with expenditure.