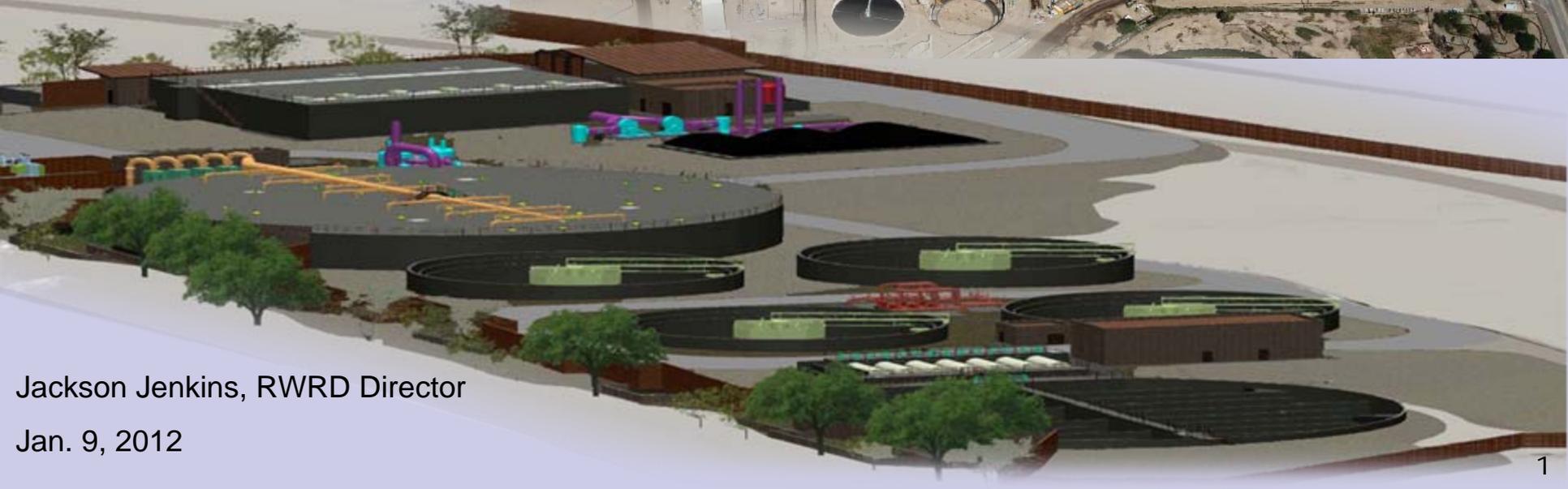


# Summary of the Status of the Regional Optimization Master Plan

Pima County  
Regional Wastewater  
Reclamation Department



Jackson Jenkins, RWRD Director

Jan. 9, 2012

# Presentation Topics

- Ina Road Upgrade & Expansion Project
- Plant Interconnect
- Water Reclamation Treatment Facility
- Central Laboratory Complex
- Biosolids / Biogas Utilization Master Plan
- Supervisory Control and Data Acquisition
- Roger Road WRF Decommissioning /  
Deconstruction Program
- Linear Park

# Ina Road Upgrade & Expansion Project

## ■ Purpose

- To comply with regulatory requirements to provide an effluent quality non-toxic to the aquatic environment in the Santa Cruz River.
- To comply with the regulatory requirement to significantly reduce nutrient concentrations in effluent discharged to the Santa Cruz River.
- To produce Class A+ reclaimed water quality
- To master plan the project to comply with envisioned future regulatory requirements.
- To expand the capacity of the Ina Road WRF to meet the population needs to 2030.



Overall Plant Progress Looking East



Bioreactor Basin, East

# Ina Road Upgrade & Expansion Project

## ■ Project

- Expand existing 37.5 MGD capacity to 50 MGD.
- Replace existing treatment processes to the Bardenpho treatment process.
- Incorporate system-wide biosolids processing and handling at Ina Road for beneficial use.
- Incorporate system-wide biogas utilization at Ina Road.
- Incorporate plant-wide upgraded electrical system for reliability and efficiency.
- Incorporate an Operations Control Center / SCADA system for process control and system-wide monitoring.
- Incorporate a plant security system to comply with DHS “designated critical infrastructure” protection.
- Plant-wide rehabilitation / upgrade of various existing plant structures / buildings.
- Incorporate state-of-the-art odor control system and good neighbor features.



Digester control building, pump room



Area 76, Tank Drain Pump Station, West  
Area 52, Chlorine Contact Basin & Bisulfite Chemical Facility

# Ina Road Upgrade & Expansion Project



Area 32, Intermediate Pump Station, East, Installing Gates

## ■ Project Procurement Method

- Construction Manager at Risk (CM@R) procurement method was selected which consists of two major components:

- Pre Construction Services – CM@R coordinates with the Design Professional and the County during development of the project design. Primary services include development of construction cost estimates, constructability reviews, design recommendations, and participation in value engineering activities.
- Construction Services – Construct the project in a series of Guaranteed Maximum Price (GMP) components.



Digester Complex

# Ina Road Upgrade & Expansion Project

## ■ Consultants

- Project Management – Jacobs Engineering
- Program Management – Greeley & Hanson / Parsons
- Design Professional – CH2MHILL

## ■ CM@R

- MWH Constructors

## ■ Contractors / Subcontractors

- Kiewitt
- McDade & Woodcock
- Sun Western

# Ina Road Upgrade & Expansion Project

## ■ Project Schedule Status

- Regulatory Compliance date for expansion of the WRF and compliance with the regulatory effluent quality requirements:

January 30, 2014

- Project substantial completion date:

October 19, 2013

- Project is currently 50% complete.
- Schedule is critical requiring significant efforts to keep project on schedule.

# Ina Road Upgrade & Expansion Project Budget / Projected Cost

	<b>ROMP BUDGET</b>	<b>PROJECTED COST</b>	<b>(SAVINGS) / OVERRUN</b>
Planning / Program Management / RWRD Staff	\$11,380,000	\$8,656,032	(\$2,723,968)
Cultural Resources	5,360,000	7,220,343	1,860,343
Engineering	22,650,000	27,513,903	4,863,903
CMAR Pre-Construction Services	1,840,000	5,227,840	3,387,840
Right-of-Way / Utilities	400,000	3,164,228	2,764,228
PM / CI Services	15,250,000	11,200,000	(4, 050,000)
Construction	218,090,000	242,778,735	24,688,735
Contingency	26,320,000	5,956,500	(20,363,500)
<b>TOTALS</b>	<b>\$301,290,000</b>	<b>\$311,717,581*</b>	<b>\$10,427,581</b>

\* Includes \$13,480,008 in items not identified during the ROMP budget preparation.

# Ina Road Upgrade & Expansion Project Guaranteed Maximum Price (GMP) Budget / Projected Cost

GMP	DESCRIPTION	ORIGINAL BUDGET (NOT INCLUDING OWNER CONTINGENCY)	CONTRACT AMOUNT (WITH OWNER CONTINGENCY)	FINAL PROJECTED COST (WITH SOME OWNER CONTINGENCY)
2	GBT & Odor System Procurement	\$634,809	\$634,809	\$626,714
3	GBT & Odor System Installation	1,448,374	1,540,000	1,490,827
4	Earthwork	7,343,300	4,727,565	3,689,118
5	IBS Digester Complex	20,793,470	20,406,428	20,400,000
6	Main Plant Upgrade	174,124,547	176,570,494	178,000,000
7	Plant Upgrades / Improvements	13,517,000	TBD	25,072,076
8 (a)	Electrical Power Distribution	6,650,000	7,750,000	7,000,000
8 (b)	Central Boiler / Chiller Plant	3,000,000	TBD	5,500,000
<b>TOTAL</b>		<b>\$227,511,500<sup>(1)</sup></b>		<b>\$242,778,735</b>

(1) The total of all the GMP Budgets of \$227,511,500 exceeded the original ROMP construction budget of \$218,090,000 primarily due to items not included in the ROMP Budget listed on Slide 8.

# Ina Road Upgrade & Expansion Project

## Items not Included in ROMP Budget

Gate Actuators	\$800,000
Security	3,212,948
New Warehouse	5,717,060
Replacement of Obsolete Electrical Gear	3,000,000
Odor Monitoring System	750,000
<b>TOTALS</b>	<b>\$13,480,008</b>

# Ina Road Upgrade & Expansion Project

## ■ Current Issues

- Project completion and schedule compliance is critical.
- Final project costs may exceed the original ROMP Budget for this project.
- Arizona Gross Tax Receipts Exemption pending.
- Digester Complex
  - Warranty
- Program to sell salvage equipment consisting of mechanical equipment, power plant equipment and pure oxygen generating equipment. An RFEI will solicit input from the marketplace on how best to sell this equipment.

# Plant Interconnect

## ■ Purpose

- To convey wastewater from the Roger Road WRF service area, where flows were approaching the plant's design capacity, to the Ina Road WRF where sufficient excess capacity exists.
- To convey raw sludge from the Water Reclamation Campus Treatment Facility to the Ina Road WRF via an existing sludge force-main or by discharge to the plant interconnect in emergency situations.
- Operational flexibility of flows between the Campus WRF and the Ina Road WRF.
- Construction flexibility to divert flows for the necessary shutdowns and tie-ins.



Laying Pipe

# Plant Interconnect



Wash Crossing Siphon

## ■ Project

- 5 miles of gravity flow sewer line ranging in diameter from 60 inches to 72 inches
- Capacity:
  - Average Design Flow = 36 MGD
  - Peak Flow = 81 MGD
  - Recent Flow = 7.6 MGD
- River and wash siphon crossings
- Metering structure
- Turn-out structure to convey raw wastewater to Water Reclamation Campus DBO Treatment Facility
- Dual purpose service road/bike path
- Odor control

# Plant Interconnect

- Project Procurement Method
  - Construction Manager at Risk (CM@R)



# Plant Interconnect

## ■ Consultant

- Design Professional – Brown & Caldwell

## ■ CM@R

- Sundt / Kiewitt

## ■ Project Management / Construction Inspection

- RWRD Staff
- Stantec

# Plant Interconnect

## ■ Project Schedule Status

Project Completed

■ December 22, 2010

Project/Operational

■ April 11, 2011



Pipe being laid

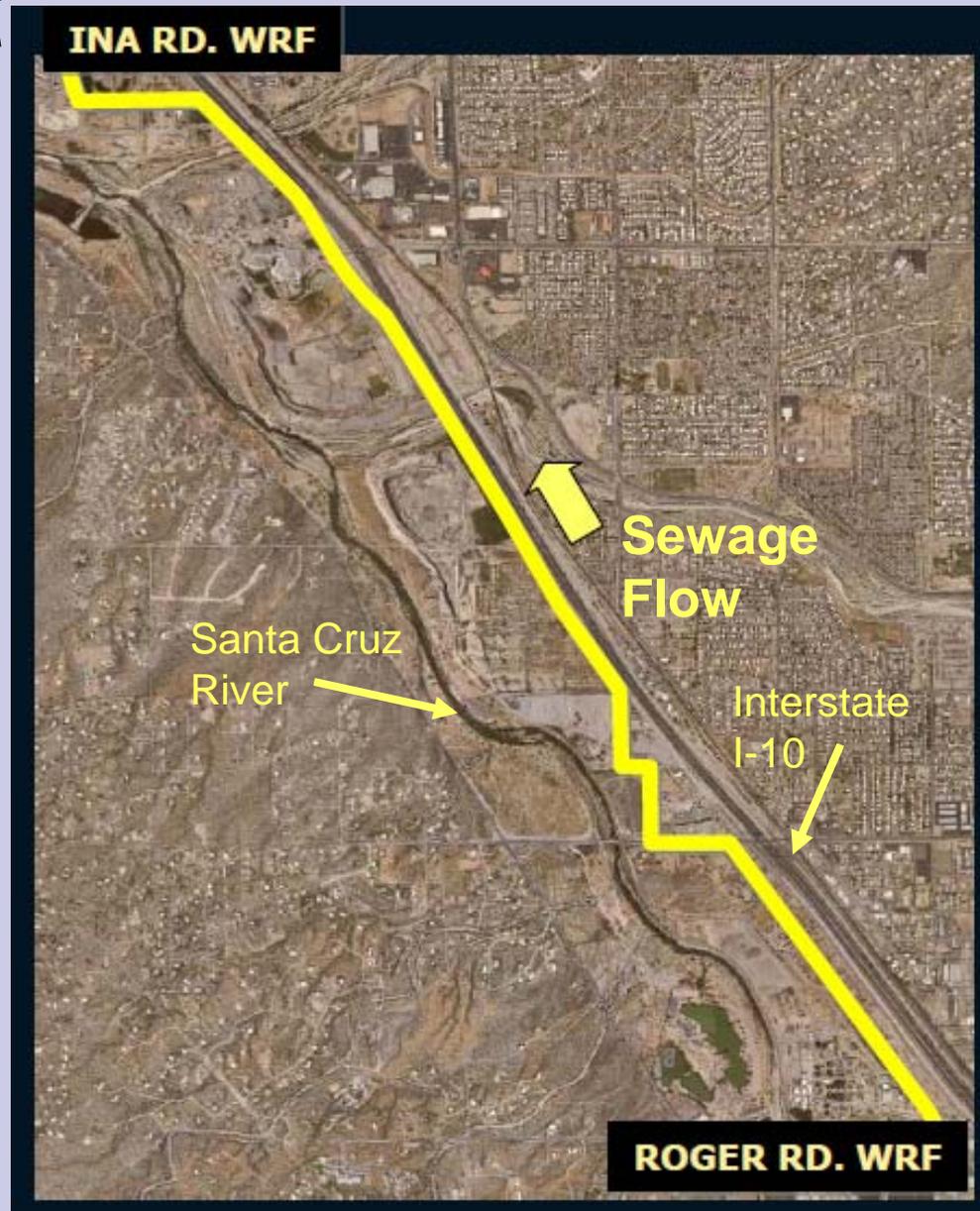
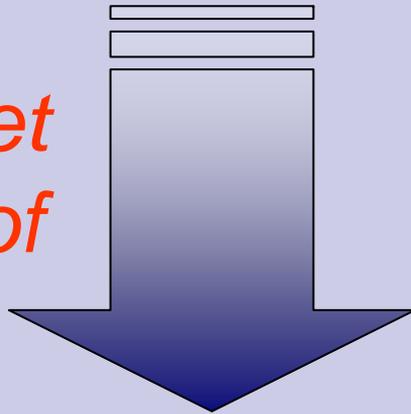
# Plant Interconnect

	ROMP BUDGET	CLOSEOUT COST	(SAVINGS) / OVERRUN
Planning / Program Management / RWRD Staff	\$1,480,000	\$1,495,460	\$15,460
Cultural Resources	2,110,000	1,414,584	(695,416)
Engineering	2,620,000	2,504,178	(115,822)
CMAR Pre-Construction Services	270,000	276,866	6,866
Right-of-Way / Utilities	3,160,000	2,114,520	(1,045,480)
PM / CI Services	2,260,000	656,330	(1,603,670)
Construction	26,260,000	24,953,969	(1,306,031)
Contingency	3,030,000	---	(3,030,000)
<b>TOTALS</b>	<b>\$41,190,000</b>	<b>\$33,415,907</b>	<b>(\$7,774,093)</b>

# Plant Interconnect

- Project Costs and Duration
  - Original \$41 million over 2 years
  - Actual \$34 million over 16 months

*Final costs under budget and ahead of schedule*



# Water Reclamation Campus Treatment Facility

## ■ Purpose

- To replace the aging Roger Road WRF with a new state-of-the-art WRF.
- To comply with regulatory requirements to provide an effluent quality non-toxic to the aquatic environment in the Santa Cruz River.
- To comply with the regulatory requirement to significantly reduce nutrient concentrations in effluent discharged to the Santa Cruz River.
- To provide Class A+ reclaimed water quality.
- To provide a plant capacity to meet the population needs to 2030.
- To provide reclaimed water quality supply to Tucson Water for their reclaimed water distribution system.



Construction of DAF Unit near site entrance

# Water Reclamation Campus Treatment Facility

## ■ Project

- New 32 MGD facility.
- Incorporate Bardenpho treatment process.
- All biosolids to be transferred to Ina Road WRF via sludge force main.
- Incorporate state-of-the-art odor control and good neighbor features.
- Manage flows to the facility in conjunction with flows to Ina Road WRF for operational efficiencies.



Architectural rendering of plant entrance



# Water Reclamation Campus Treatment Facility

## ■ Project Procurement Method

- Design Build Operate (DBO)
- County owned
- Private sector operations – 15 years with option to renew for additional 5 years.



Administration and Maintenance Buildings



# Water Reclamation Campus Treatment Facility

- Design-Build-Operate (DBO) Contractor

- CH2MHILL

- Project Management / Construction Inspection

- RWRD Staff

- HDR Engineering

# Water Reclamation Campus Treatment Facility

## ■ Project Schedule Status

- Regulatory Compliance date for facility to be operational and in compliance with regulatory effluent quality requirements:

January 30, 2015

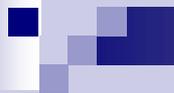
- Contract substantial completion date:

August 14, 2014

- Project is currently **23%** complete.



Pipe installation for Bioreactor



# Water Reclamation Campus Treatment Facility Budget / Projected Cost

	ORIGINAL ROMP BUDGET	PROJECTED FINAL COST	(SAVINGS) / OVERRUN
Planning, Legal, Program Management	\$6,090,000	\$7,372,180	\$1,282,180
Cultural Resources	—	327,820	327,820
Engineering	21,080,000	Included in DBO Contract Cost	21,080,000 <sup>(1)</sup>
Construction	240,000,000	164,063,281 <sup>(1)</sup>	(75,936,719) <sup>(1)</sup>
Project Management / RWRD staff	—	2,500,000	2,500,000
Contingency	7,930,000	8,203,164 <sup>(1)</sup>	273,164
<b>TOTALS</b>	<b>\$275,100,000</b>	<b>\$182,466,445</b>	<b>(\$92,633,555)<sup>(2)</sup></b>

(1) As an incentive to DBO Proposers the design/build budget for this project was advertised as \$240,000,000 leaving out the ROMP Budget Engineering cost of \$21,080,000. The DB Cost Proposal submitted by the selected DBO Company was \$164,063,281 to which the RWRD added an Owners Contingency of \$8,203,164 resulting in a Contract Award Amount of \$172,266,445 (approximately \$68 million below the advertised budget).

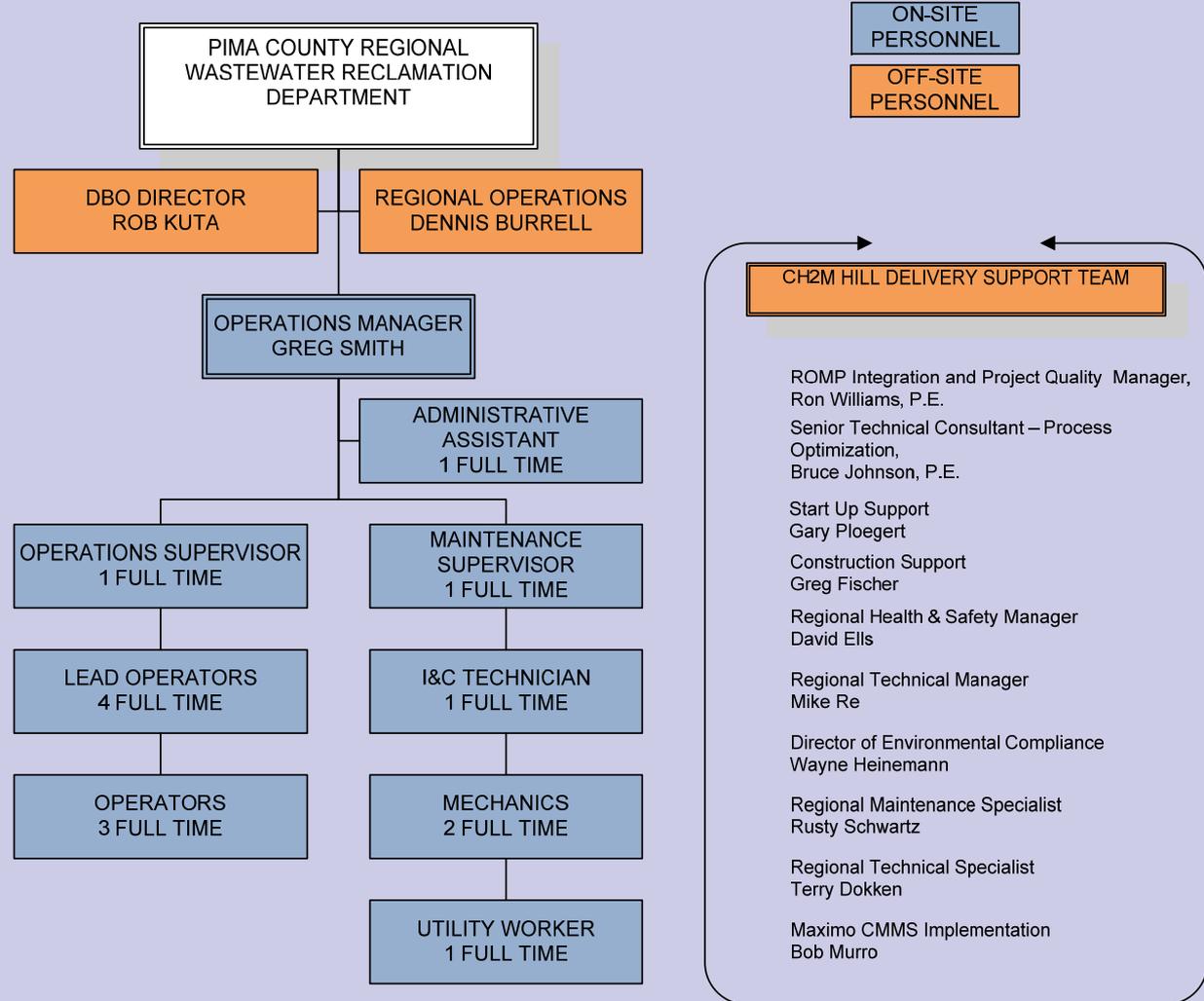
(2) \$60,000,000 of the savings in this project has already been deducted from the original ROMP Budget of \$720,000,000 to the current ROMP Budget of \$660,000,000.

# Water Reclamation Campus Treatment Facility

## ■ Staffing Issues

- In awarding the DBO contract to CH2MHILL, the Board of Supervisors required CH2 to hire 75% of their proposed non-management staff from RWRD staff volunteers or 11 volunteers.
- 68 RWRD staff have volunteered to be considered for the 11 positions.
- RWRD and CH2 will be conducting meetings with the 68 volunteers starting in April, 2012 to explain CH2 employee practices, how CH2 will conduct its selection process, how the BOS requirement of offering RWRD volunteers an “equal or better” employment package, etc.
- CH2 desires to be fully staffed at the new facility by mid 2013.

# Proposed Water Campus Facility Operations Staff



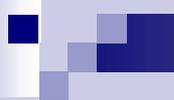
# Water Reclamation Campus Treatment Facility

## ■ Current Issues

- Resolution / cost of TEP power to Campus site.
- Credit for Arizona Gross Tax Receipts Exemption.
- Placement of RWRD staff to DBO employment.



Site construction



# Central Laboratory Complex

## ■ Purpose

- To provide a state-of-the-art water laboratory to provide all regulatory agency compliance testing as contained in various regulatory agency permits issued to RWRD.
- To replace the RWRD Training Center which will be demolished with the decommissioning of the Roger Road WRF.
- To provide permanent offices for the Compliance and Regulatory Affairs Office currently housed in temporary offices at the Ina Road WRF.
- To collaborate laboratory activities with other governmental agencies (USEPA) and universities (UofA).

# Central Laboratory Complex

## ■ Project

- Construction of water laboratory, training center and CRAO offices consisting of 41,016 square feet.



Site plan 2011

# Central Laboratory Complex

## ■ Project Procurement Method

### □ Laboratory Structure

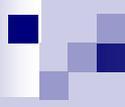
- Design-Bid-Build (DBB)
- Project Management by Facilities Management Department

### □ Laboratory Complex Site Work

- Design-Bid-Build (DBB)
- Project Management by RWRD



Interior



# Central Laboratory Complex

## ■ Building Complex

- Design Professional – HDR Engineering
- Project Management – Facilities Management Dept. / RWRD
- Construction Inspection – HDR Engineering  
– Commissioning Concepts
- Contractor – D L Withers

## ■ Site Work

- Design Professional – Stantec
- Project Management – RWRD Staff
- Construction Inspection – RWRD Staff  
– Stantec
- Contractor – Sun Western

# Central Laboratory Complex

## ■ Project Schedule Status

### □ Building structure

- Construction completed with move in completed in December 2011.

### □ Site work

- Substantial completion in the first quarter of 2012.



Exterior Lab Complex

# Central Laboratory Complex Budget / Projected Cost

	ORIGINAL ROMP BUDGET	PROJECTED FINAL COST	(SAVINGS) / OVERRUN
Planning / Program Management / RWRD Staff	\$1,050,000	\$1,521,969	\$471,969
Cultural Resources	200,000	410,000	210,000
Engineering	3,730,000	3,460,000	(270,000)
Project Management / CI Facilities Management RWRD	1,650,000	1,690,411	40,411
Construction	19,820,000	18,174,106 <sup>(1)</sup>	(1,645,894)
Lab Equipment / Furnishing	---	---	---
Contingency	2,420,000	3,613,514	1,193,514
<b>TOTALS</b>	<b>28,870,000</b>	<b>28,870,000</b>	<b>---</b>

(1) Projected construction cost includes estimate of \$7,797,000 for pending laboratory expansion.

# Central Laboratory Complex

## ■ Current Issues

- Expansion of laboratory complex for future anticipated RWRD regulatory monitoring requirements and leased to UofA Environmental Quality Laboratory in interim.
- Funding source for lab expansion design, project management, construction inspection and construction to be from existing ROMP Budget.



Interior Chemistry Lab



Lab Facility exterior

# Biosolids / Biogas Utilization Master Plan

## ■ Purpose

- Develop a regional master plan for the current and future treatment and reuse of system-wide biosolids.
- Develop a master plan for the complete beneficial utilization of biogas.



Biosolids Loading



Digester Gas Complex

# Biosolids / Biogas Utilization Master Plan

## ■ Project Schedule Status

- Contract to develop the master plan awarded in January 2011.
- To date, five workshops have been held.
- A Request for Expressions of Interest (RFEI) to obtain interest and recommendations from the marketplace was recently completed.
- Workshop to receive consultants recommendations conducted on December 8, 2011.
- Final recommendations and Master Plan to be completed during January 2012.



# Biosolids / Biogas Utilization Master Plan

- Study Consultant

- Brown & Caldwell

- Project Management

- RWRD Staff

# Biosolids / Biogas Utilization Master Plan

## ■ Options Under Consideration

- Biogas cleaned to pipeline quality and sold to pipeline commercial markets.
- Combined Heat Power (CHP) - Cogeneration of biogas to produce electricity. Generated heat to dry sludge or convert digestion to thermophilic digestion to produce Class A biosolids.
- Bio Compressed Natural Gas (BioCNG) to phase-in to fuel RWRD sludge handling and commercial vehicles.
- Side stream treatment of digester sludge centrate to retrieve struvite and nutrients for beneficial reuse and improve treatment plant process operations.
- Contingency plan for land application of biosolids.

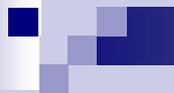


# Biosolids / Biogas Utilization Master Plan

## ■ Alternative Project Procurement Methods

### □ Being considered:

- Design-Build (DB)
- Design-Build-Operate (DBO)
- Design-Build-Finance-Operate (DBFO)
- Design-Build-Finance-Own-Operate (DBFOO)



# Biosolids / Biogas Utilization Master Plan Budget / Projected Cost

	ORIGINAL ROMP BUDGET	PROJECTED FINAL COST	(SAVINGS) / OVERRUN
Planning / Program Management / RWRD Staff	\$700,000	\$550,000	(\$150,000)
RWRD Staff	350,000	280,000	(70,000)
Engineering Study / Design	2,560,000	2,140,000	(420,000)
Project Management / CI	1,330,000	1,110,000	(220,000)
Utilities	---	1,180,000	1,180,000
Construction	15,020,000	16,032,000	1,012,000
Contingency	1,850,000	4,518,000	2,668,000
<b>TOTALS</b>	<b>\$21,810,000</b>	<b>\$25,810,000</b>	<b>\$4,000,000</b>

Note: If private sector ownership is selected for any options resulting from this master plan, the engineering and construction cost of those options will be reduced from this budget.

# Supervisory Control and Data Acquisition (SCADA)

## ■ Purpose

- Comprehensive system-wide SCADA system will incorporate the following:
  - Operations Control Center to be located at the Ina Road WRF to provide system-wide 24/7 SCADA Management.
  - Process control / process monitoring of Ina Road WRF operations.
  - System-wide SCADA control / monitoring of Sub-Regional Facilities.
  - SCADA monitoring of Conveyance System operations.
  - System-wide security monitoring.
  - RWRD dispatch operations.
  - SCADA monitoring of Water Reclamation Campus DBO Facility.



# Supervisory Control and Data Acquisition (SCADA)

- Design / System Intergrator Consultant
  - EMA
  
- Project Management
  - RWRD Staff



# Supervisory Control and Data Acquisition (SCADA)

## ■ Project Status

- Design underway for Operations Control Center at Ina Road WRF. Schedule is coordinated with Ina Road schedule.
- SCADA design underway for all SCADA operations at Ina Road WRF. Design and schedule is coordinated with Ina Road Design Professional and Project Manager.
- Entire SCADA Program closely coordinated with Pima County Information Technology Department (ITD).
- SCADA systems being phased in at all Sub-regional Facilities.

# SCADA Budget / Projected Cost

	ORIGINAL ROMP BUDGET	PROJECTED FINAL COST	(SAVINGS) / OVERRUN
Planning / Program Management / RWRD Staff	\$1,530,000	\$2,088,000	\$558,000
Engineering	1,980,000	867,000	(1,113,000)
Project Management / CI	950,000	Included in Construction	(950,000)
Construction	7,940,000	8,438,000	498,000
ITD Procurement	---	1,100,000	1,100,000
Contingency	1,060,000	1,100,000	40,000
<b>TOTALS</b>	<b>\$13,460,000</b>	<b>\$13,593,00</b>	<b>\$133,000</b>



# Roger Road WRF Decommissioning / Deconstruction Program

## ■ Purpose

- Upon the start up of operations of the Water Campus Reclamation Facility scheduled for August 14, 2014, the existing Roger Road WRF will be decommissioned and closed in accordance with regulatory requirements.

# Roger Road WRF Decommissioning / Deconstruction Program

## ■ Project

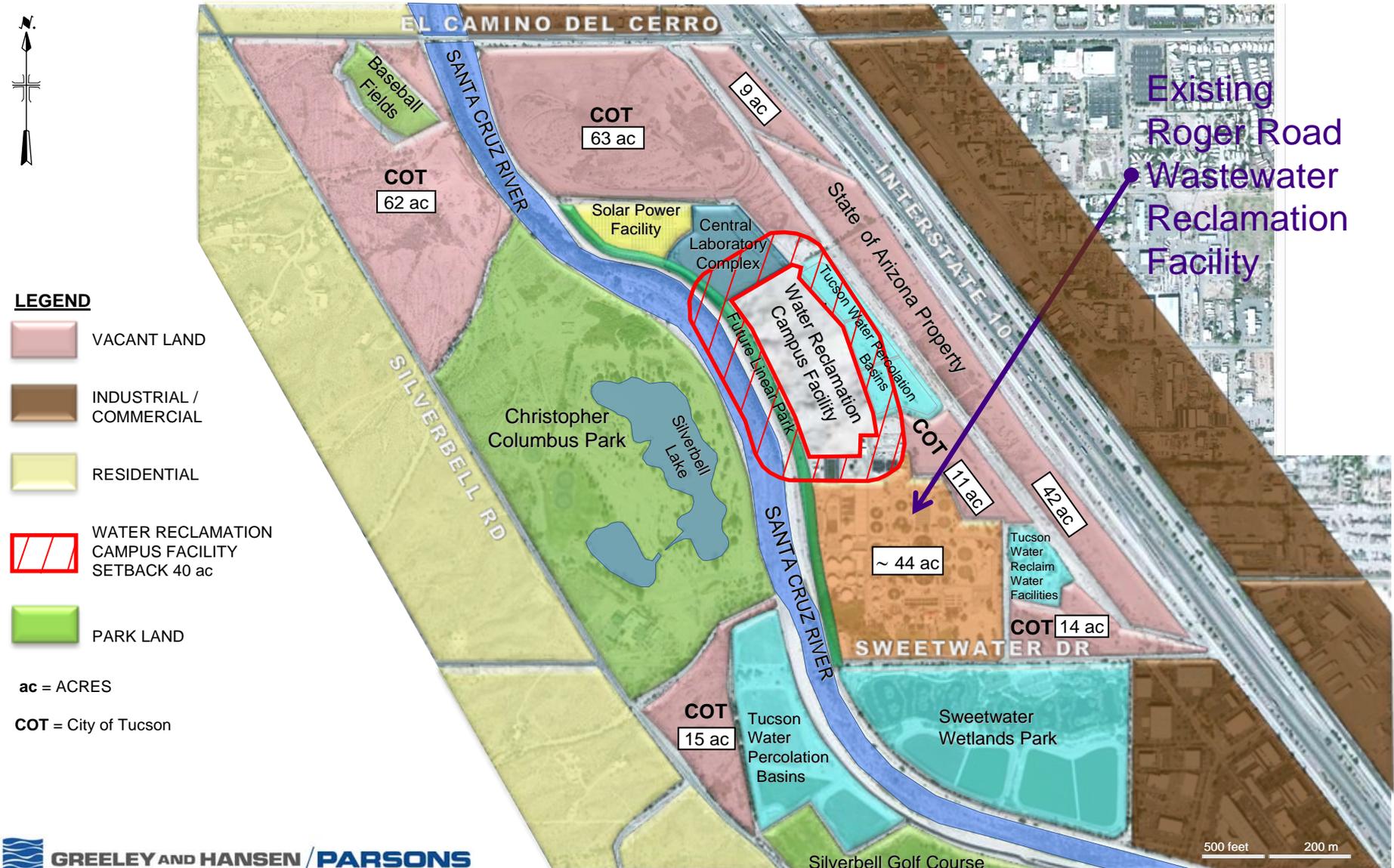
- A Clean Closure Plan will be developed and submitted to ADEQ and PDEQ for approval in advance of the start-up of the Water Campus Facility.
- The Clean Closure Plan must address various environmental issues and provide a remediation plan for any negative environmental issues such as removal of any hazardous waste and addressing any cultural issues.
- Upon shut down of the Roger Road Facility, the RWRD will offer a public sale of salvaged equipment such as mechanical equipment, power plant equipment, etc.
- Concurrent with the implementation of the Clean Closure Plan the RWRD will issue a RFEI to request recommendations from the marketplace on ways to market the 44 acres of Roger Road plant property to obtain maximum value.



# Roger Road WRF Decommissioning / Deconstruction Program

- Planning Consultant
  - Greeley & Hansen
  
- Project Management
  - RWRD Staff

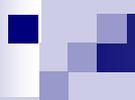
# Roger Road WRF Property and Surrounding Vacant Land



# Roger Road WRF Decommissioning Budget / Projected Cost

	ORIGINAL ROMP BUDGET	PROJECTED FINAL COST	(SAVINGS) / OVERRUN
Planning / Program Management / RWRD Staff	\$1,830,000	\$2,270,437	\$440,437
Cultural Resources	---	300,000	300,000
Engineering	2,840,000	2,840,000	---
PM / CI Services	780,000	780,000	---
External Inspections	1,440,000	1,440,000	---
Construction	27,980,000	27,980,000	---
Contingency	3,420,000	5,497,299	2,077,299
<b>TOTALS</b>	<b>\$38,290,000</b>	<b>\$41,107,736</b>	<b>\$2,817,736</b>

**Note: These projected costs do not reflect the value of the Roger Road Property in the event it is sold or leased**



# Linear Park

## ■ Project

- A Linear Park is proposed in a narrow right-of-way ranging from 10 to 100 feet, between the Santa Cruz River dike and the existing Solar Energy Project, the Central Laboratory Complex, the Water Campus Reclamation Facility and the existing Roger Road WRF. Initially the Park will commence at Sweetwater Drive and terminate at Camino del Cerro.



# Linear Park

## ■ Project

- The Park is a partnership between the RWRD, the Flood Control District and the Parks and Recreation Department with the following specific roles:
  - RWRD – Retain a consultant to develop the design.
  - Flood Control District – Provide the capital cost to construct the park.
  - Parks and Recreation Department – Operate and maintain the park.





# Linear Park

## ■ Schedule

- The Linear Park cannot be constructed until after completion of the Water Campus Reclamation Facility and decommissioning and closure of the Roger Road WRF.



# Linear Park

## ■ Issues

- A funding source has not been budgeted by Flood Control District for the construction of the park.
- The 100 foot right-of-way adjacent to the Roger Road WRF contains various structures that must be decommissioned and removed.
- A proposed three party IGA has been prepared but has not been executed.

# ROMP Budget vs. Projected Final Costs

	ROMP BUDGET	PROJECTED FINAL COSTS
Ina Road WRF	\$301,290,000	\$311,717,581
Plant Interconnect	41,190,000	33,415,907
Water Reclamation Campus	275,100,000	182,466,445
Central Laboratory Complex	28,870,000	28,870,000 <sup>(5)</sup>
Biosolids / Biogas Master Plan	21,810,000	25,810,000 <sup>(2)</sup>
SCADA	13,460,000	13,593,000
Roger Road WRF Decommissioning / Deconstruction	38,290,000	41,107,736 <sup>(3)</sup>
<b>TOTALS</b>	<b>\$720,010,000 <sup>(1)</sup></b>	<b>\$636,980,669 <sup>(4)</sup></b>

- 1) The original ROMP Budget of \$720,000,000 has been reduced to \$660,000,000 due primarily to the budget savings in the award of the Water Campus Treatment Facility DBO Project.
- 2) Significant savings in capital costs may be realized if the ultimate master plan results in a Public Private Partnership with private sectors ownership such as in a DBFOO procurement.
- 3) The capital cost for the deconstruction of the Roger Road WRF property may be significantly reduced in the event of the sale or lease of the property.
- 4) Additional reductions in the ROMP Budget below current ROMP Budget of \$660,000,000 is anticipated when the project procurement methods for the Biosolids / Biogas Master Plan and deconstruction of the Roger Road WRF Property are decided.
- 5) The projected costs for the Central Laboratory Complex includes \$7,797,000 for an expansion to the Laboratory for future RWRD needs and an interim lease agreement with the University of Arizona.

# Projected ROMP Program “Soft Costs” (1)

	PROJECTED FINAL COSTS	SOFT COST <sup>(1)</sup>	PERCENT OF SOFT COST OF PROJECT COST
Ina Road WRF	\$311,717,581	\$59,818,118	19.2%
Plant Interconnect	33,415,907	6,347,418	19.0
Water Reclamation Campus	182,466,445	24,454,853	13.4
Central Laboratory Complex	28,870,000 <sup>(5)</sup>	7,082,380	24.5
Biosolids / Biogas Master Plan	25,810,000 <sup>(2)</sup>	4,080,000	15.8
SCADA	13,593,000	2,955,000	21.7
Roger Road WRF Decommissioning / Deconstruction	41,107,736 <sup>(3)</sup>	7,330,437	17.8
<b>TOTALS</b>	<b>\$636,980,669 <sup>(4)</sup></b>	<b>\$112,068,206</b>	<b>17.6%</b>

- 1) “Soft Costs” have been defined as projected final project costs excluding hard construction costs, contingency and land acquisition.

# ROMP Expenses Inception-to-Date

Ina Road WRF Capacity & Effluent Upgrade	\$ 138,443,280
Biosolids Facilities	\$ 37,266,207
12.5 MGD Expansion	\$ 30,438,906
BNRAS System Modification	\$ 5,173,860
HPO Replacement System	\$ 60,820,070
Power Gen & Dist Facilities	\$ 4,744,238
Class A Biosolids	\$ 447,948
Compliance Lab Complex	\$ 18,168,875
Roger Road WRF Demolition	\$ 67,222
Water Reclamation Campus	\$ 48,319,205
Plant Interconnect	\$ 33,167,898
SCADA	\$ 4,264,266
<b>TOTAL ROMP EXPENSES TO DATE</b>	<b>\$ 242,878,695</b>

# ROMP Jobs Created\*

Ina Road WRF Capacity & Effluent Upgrade	1,630
Biosolids Facilities	439
12.5 MGD Expansion	358
BNRAS System Modification	61
HPO Replacement System	716
Power Gen & Dist Facilities	56
Class A Biosolids	5
Compliance Lab Complex	214
Roger Road WRF Demolition	1
Water Reclamation Campus	569
Plant Interconnect	390
SCADA	50

**TOTAL NUMBER ROMP CREATED JOBS** **2,859**

\* Job numbers based on US Bureau of Labor Statistics where 11,768 jobs / \$1 billion spent are created.