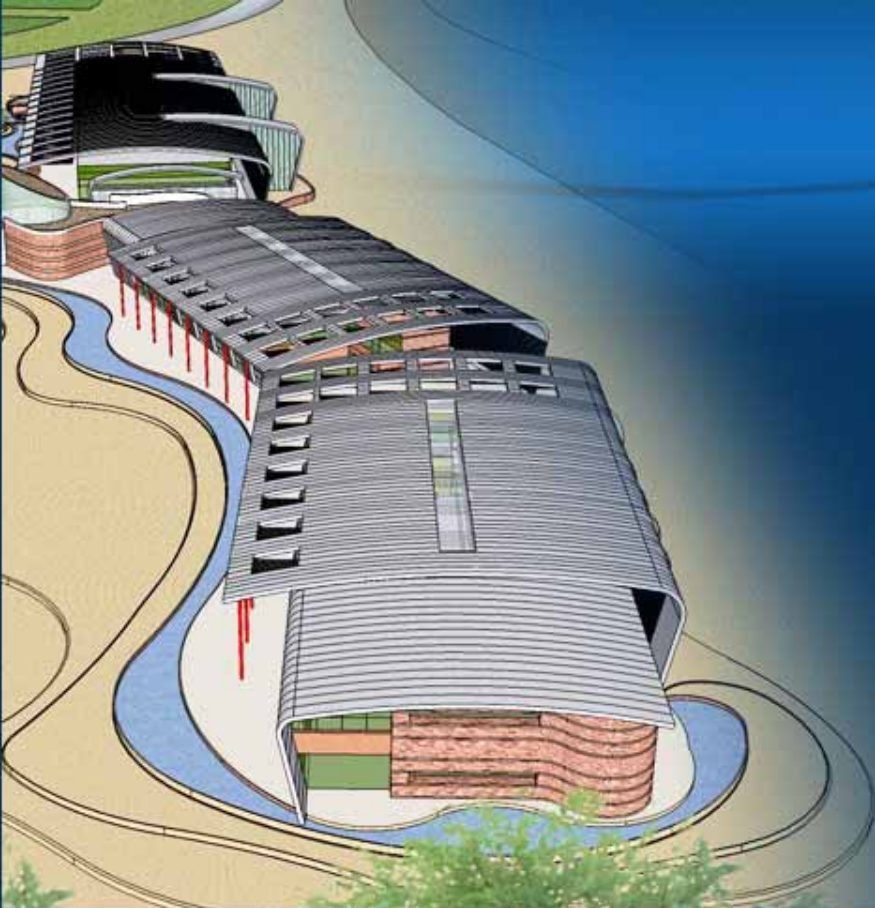


Water

Infrastructure, Supply & Planning Study
A City of Tucson and Pima County Cooperative Project



Regional Optimization Master Plan

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Pima County Regional Wastewater
Reclamation Department



July 23, 2008

Current Challenges/Threats

- **Regulatory requirement to reduce nitrogen/ammonia concentration in effluent discharged to the Santa Cruz River**
- **Maintain AZPDES and APP compliance during massive upgrade construction**
- **Have process upgrades on line to meet regulatory deadlines of 2014/2015**
- **Serve population growth needs**
- **Fund the program via substantial rate increases**

Regional Optimization Master Plan

Scope of Work

- ✓ **Develop the optimal treatment process and plan to comply with regulatory requirements to reduce total nitrogen concentrations in discharged effluent**
- ✓ **Master plan foreseeable future regulatory requirements**
- ✓ **Determine the long-term capacity needs of the County**



Ina Road WRF Headworks

Regional Optimization Master Plan

Scope of Services

- ✓ **Develop long-term plan for the treatment, handling and reuse of system bio-solids and bio-gas**
- ✓ **Develop a detailed implementation schedule to meet regulatory implementation deadlines**
- ✓ **Develop a financial plan to support the system's regulatory and other needs for the next fifteen years**

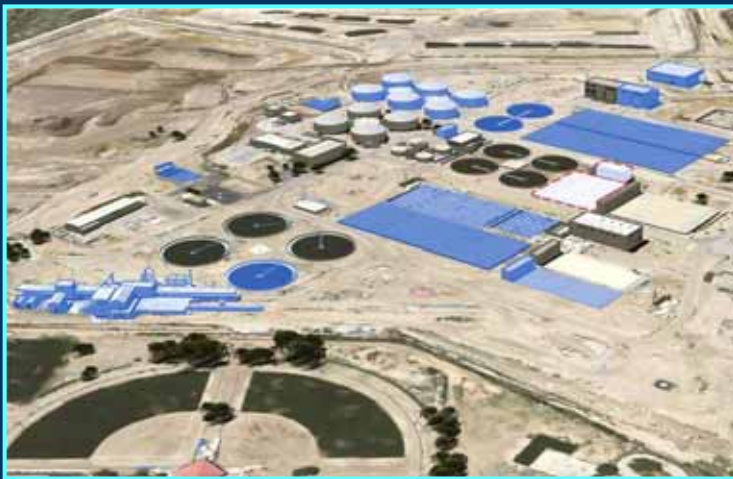


Regulatory Implementation Requirements to Reduce Total Nitrogen Concentrations

	Ina Road WRF	Roger Road WRF
<ul style="list-style-type: none"> ✓ Complete initial engineering study ✓ Recommendation for upgrading treatment plants ✓ Submit recommended plan letter to ADEQ 	February 1, 2007	January 30, 2007
<ul style="list-style-type: none"> ✓ Award contract for construction 	December 31, 2010	January 30, 2011
<ul style="list-style-type: none"> ✓ Treatment of effluent to non-toxic nitrogen levels 	January 30, 2014	January 30, 2015

ROMP Plan at a Glance

- ✓ Plant Interconnect – 28 mgd average, 72 mgd peak flow
- ✓ Expand Ina Road WRF to 50 mgd
- ✓ Construct new 32 mgd Water Reclamation Campus (in vicinity of existing Roger Road WRF)
- ✓ Good neighbor facilities
- ✓ Decommission existing 41 mgd Roger Road WRF
- ✓ Meet growth needs to year 2030



Expanded Ina Road WRF



32 mgd Water Reclamation Campus

ROMP Cost Estimate

(2006 dollars)

Ina Road WRF Upgrade/Expansion	\$243,900,000
Electrical Upgrades	\$35,000,000
Plant Interconnect	\$22,300,000
Water Reclamation Campus	\$211,000,000
Roger Road WRF Demolition	\$23,800,000
Total Estimated Cost	\$536,000,000*

* Cost estimate includes design costs, UV disinfection and 5% contingency.

50 MGD Ina Road Water Reclamation Facility

- Expand treatment capacity to 50 mgd
 - Convert existing processes to Bardenpho process
 - Additional 12.5 mgd expansion
- Centralized biosolids processing and handling
 - Reduces overall cost
 - Provides for co-generation bio-gas utilization at one location
 - Provides one point of distribution of final product



50 MGD Ina Road Water Reclamation Facility

**Existing and Expanded
Ina Road WRF
Approximately 160 acres**

EXISTING

PROPOSED:

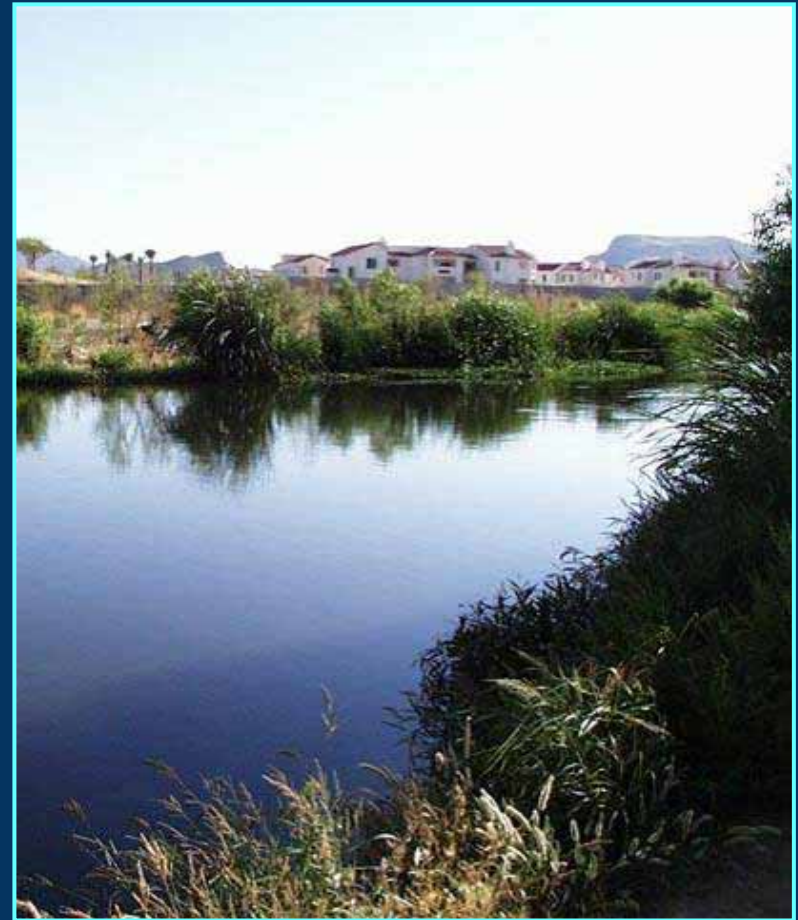
- Bardenpho Treatment Units
- Primary Clarifier
- Secondary Clarifiers
- Centralized Biosolids
- Enhanced Chlorination

Proposed
extent of
screen
enclosure

Sports
Park

32 MGD Water Reclamation Campus

- 32 mgd Bardenpho treatment train
- PCRWRD Central Laboratory Facility
- Showcase for cultural and biological resources
- Environmental enhancements partnered with City of Tucson
- Economic development
- Solar power project

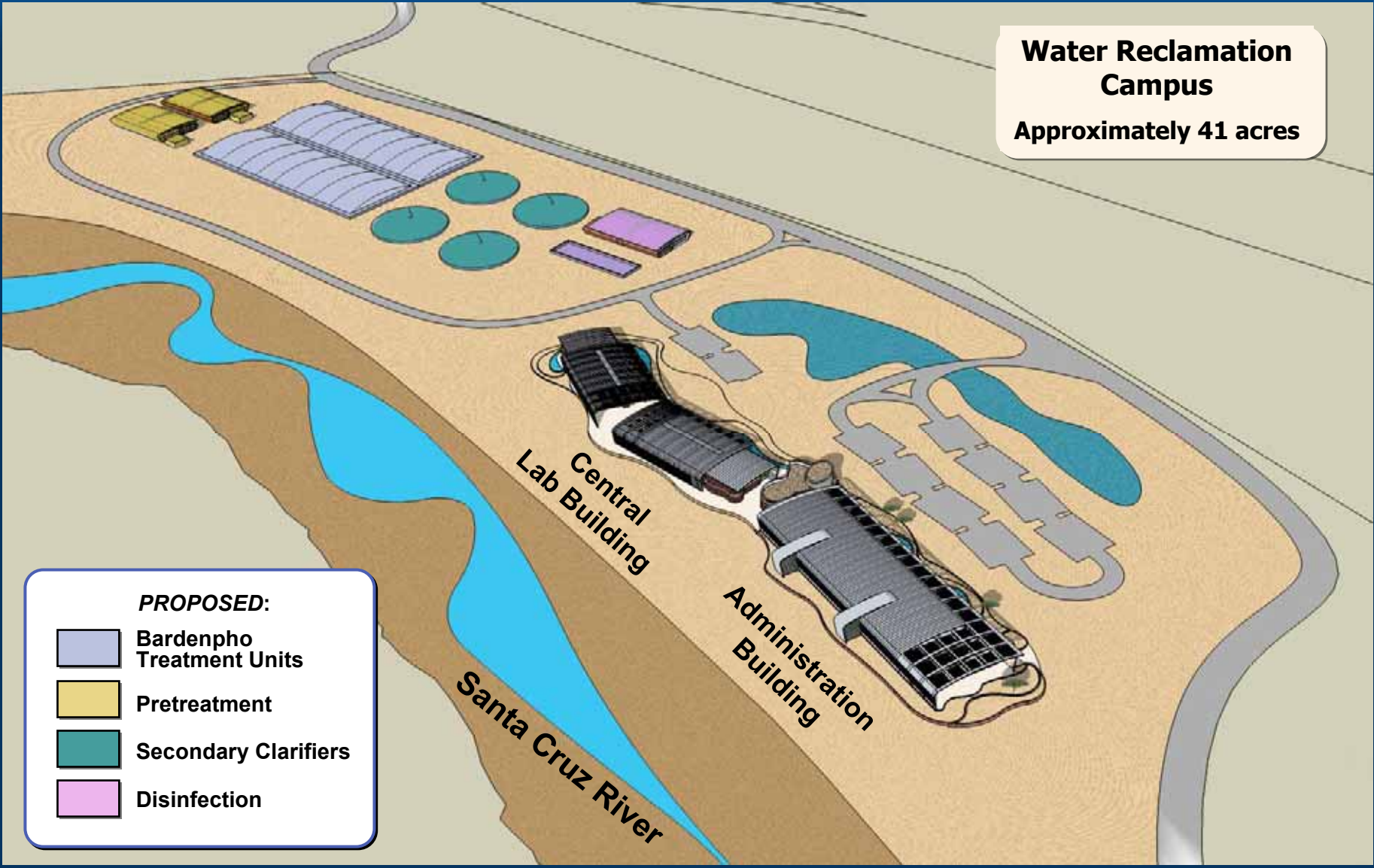


Riparian area near the Ina Road WRF





32 MGD Water Reclamation Campus

Overall Aerial View

Water Reclamation Campus
Approximately 41 acres

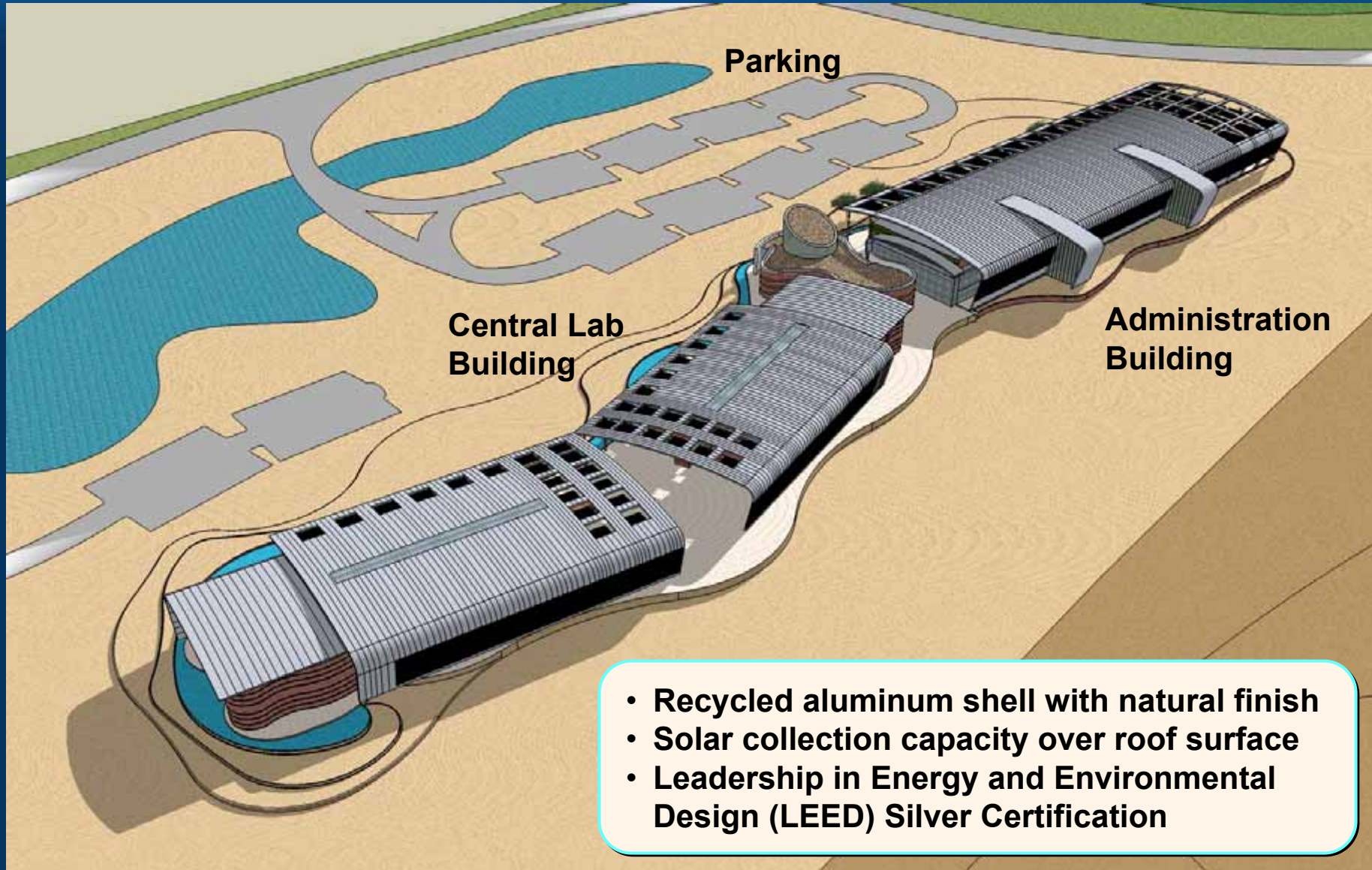


PROPOSED:

-  Bardenpho Treatment Units
-  Pretreatment
-  Secondary Clarifiers
-  Disinfection

32 MGD Water Reclamation Campus

Administration and Central Lab Building Concept Aerial View



ROMP Implementation Costs

Initial Estimated Cost (2006 dollars): **\$536 million**



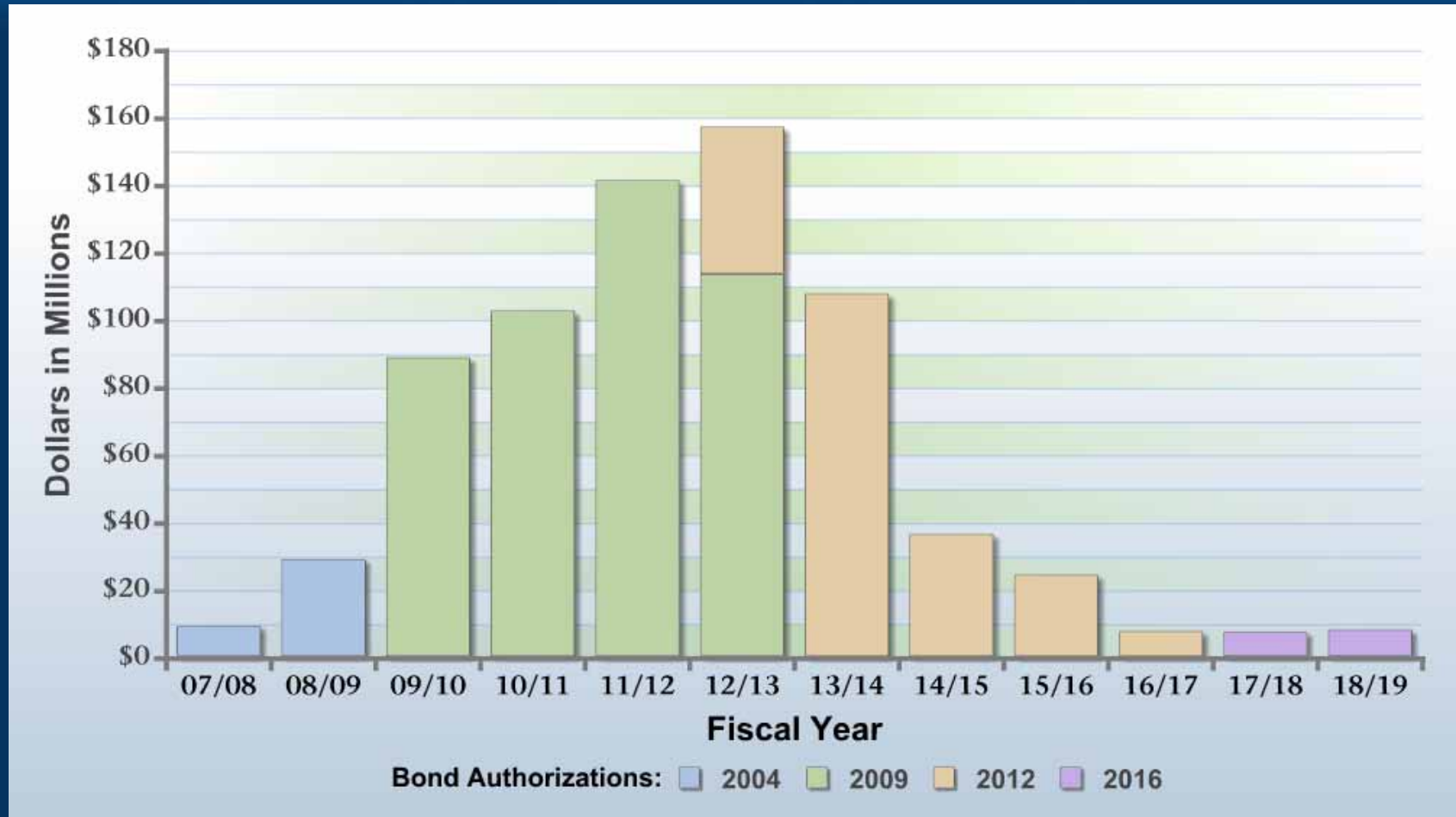
**ROMP budget with cost Inflation
(assuming an inflation rate of 5%):** **\$720 million**



Bonding / Debt Service: **\$1+ billion**

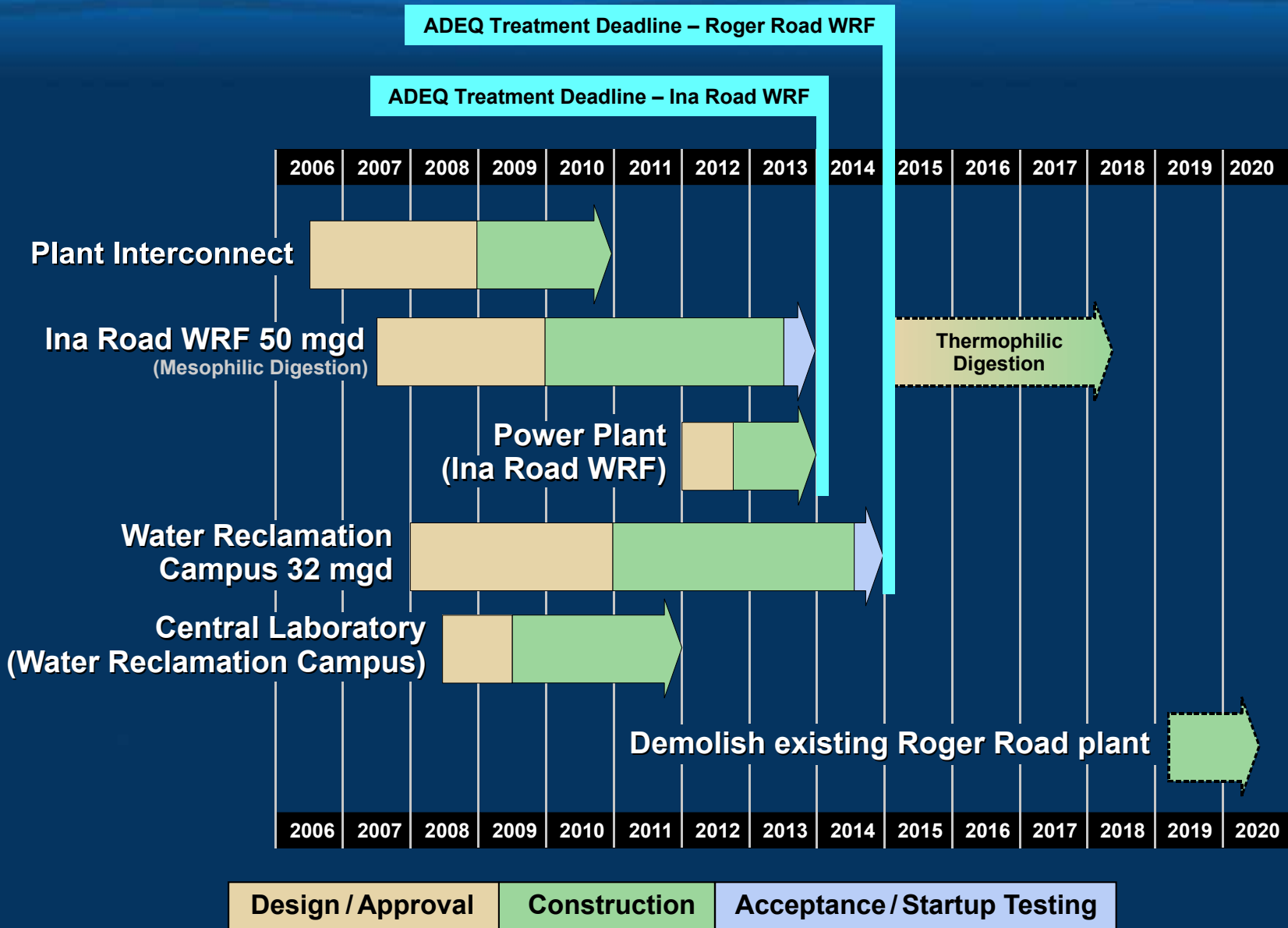
*Largest Capital Improvement Program
in Pima County to date*

ROMP Funding – Bond Authorizations



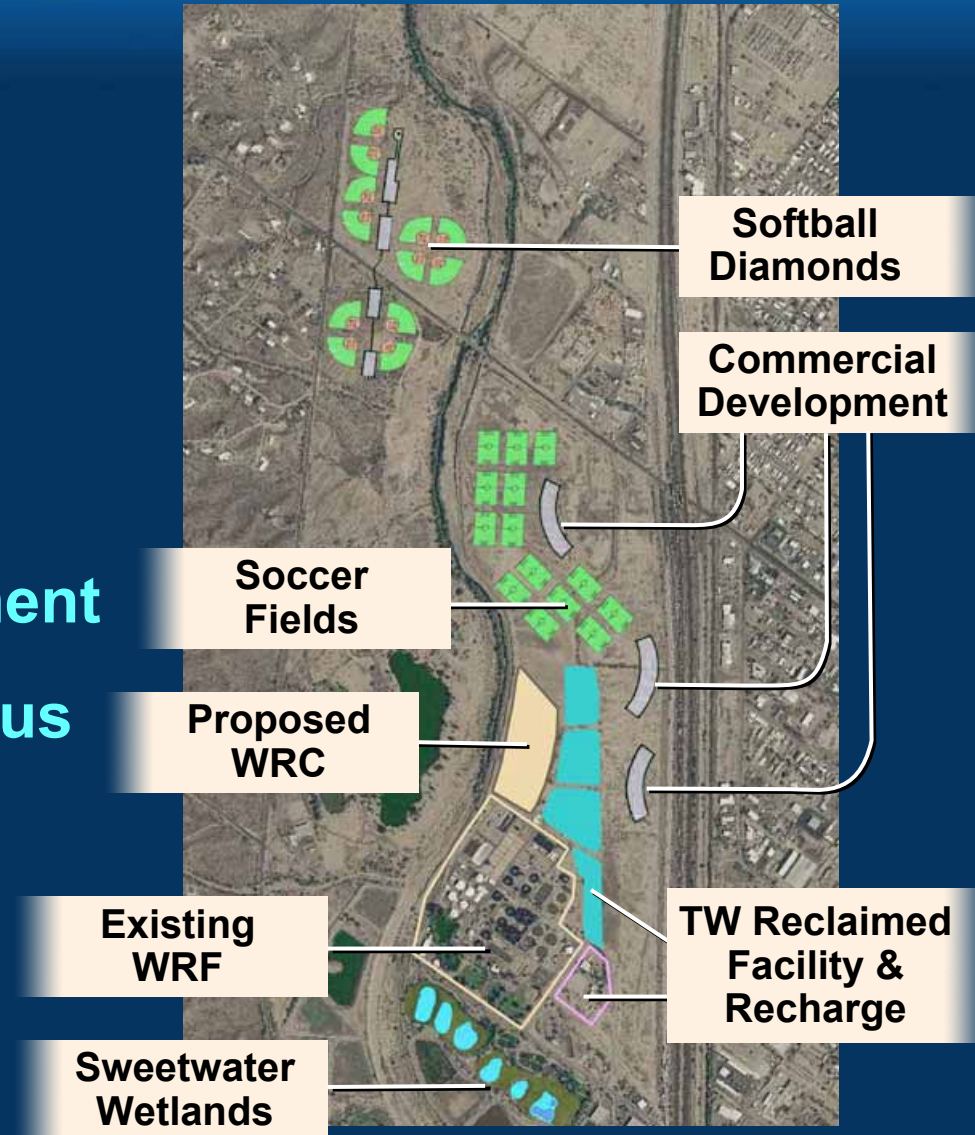
Conceptual ROMP Bond Funding

ROMP Implementation Schedule



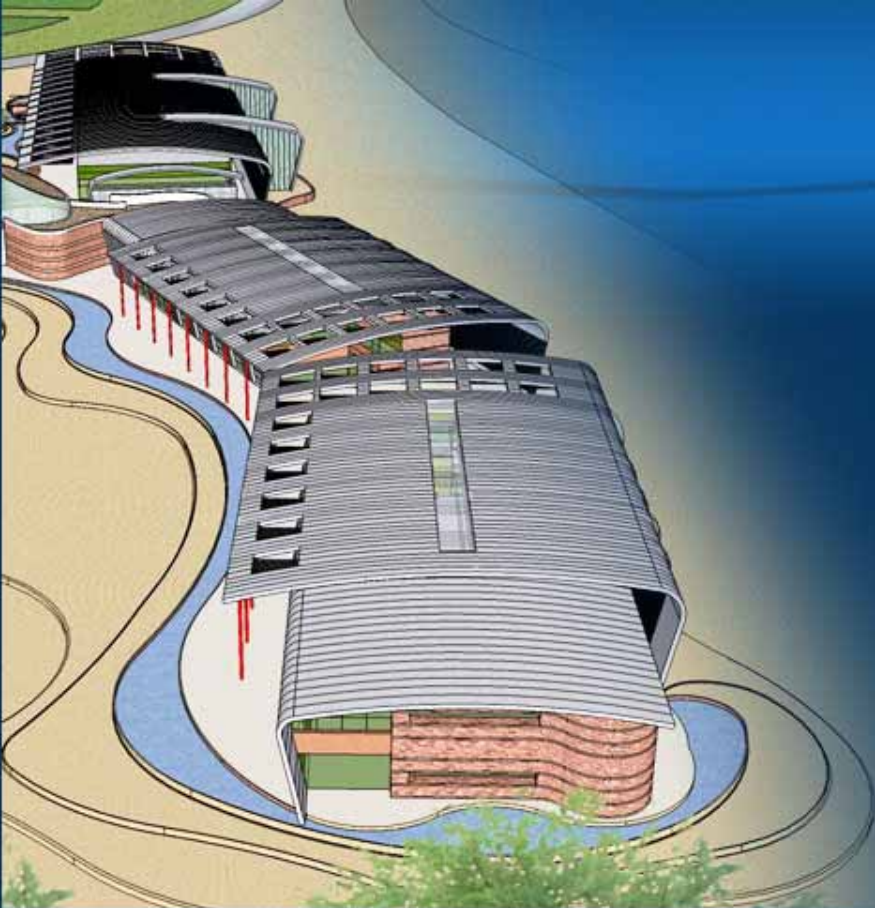
Possible Community Enhancements

- Park enhancements
- Regional / International Sports Complex
- Economic development
- Environmental enhancement
- Water Reclamation Campus
- Studies underway
- County/City/State partnerships



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Questions

