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# Community Enhancement Project Grant Workshop

March 4, 2014  
Water Resources Research Center





COLLEGE OF  
AGRICULTURE  
& LIFE SCIENCES

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## Workshop Agenda

- C2E Intro and Grant Requirements (15 min)
  - Candice Rupprecht, University of Arizona WRRC
- Community Enhancement Project Examples (20 min)
  - Lisa Shipek, Watershed Management Group (WMG)
- Green Infrastructure permitting (10 min)
  - Gary Wittwer, City of Tucson
- Q&A (remainder of hour)

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# C2E Intro and Grant Requirements

Candice Rupprecht, University of Arizona WRRC  
[candicer@cals.arizona.edu](mailto:candicer@cals.arizona.edu)



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# Conserve to Enhance (C2E)

C2E motivates participants to use water more efficiently by linking their water conservation efforts with environmental enhancement in the community.





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## Tucson C2E Goals

- Enhance quality of life
- Restore ecosystems
- Improve biodiversity

The environment can be a significant motivator that makes these connections.


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## Tucson C2E Pilot Program

Since January 2011:

- 60 participants began a 2 year enrollment in January 2011-Dec. 2013
- **3.2 million gallons** of water conserved by participants
- 29 rainwater harvesting projects implemented
- **\$37,000 donated** to the Tucson C2E fund
- **\$43,000 invested** in local enhancement projects




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**UTILITY SERVICES STATEMENT**  
**BANK DRAFT - PLEASE DO NOT PAY**

Tucson Water Customer Service Office  
 Phone: 520-791-3242  
 Chalkley Tucson: 800-588-8488  
 www.tucsonwater.gov

Account Name:  
 Account Number:  
 Service Address:  
 Bill Date: 08/03/2011  
 Service Period: 07/05/2011 to 08/02/2011  
 Hours: 8:00 am - 5:00 pm MST (Mon-Fri)

Pima County Regional Wastewater  
 Reclamation Department  
 Phone: 520-793-9809  
 www.pima.gov/water

City of Tucson Environmental Services  
 Phone: 520-793-9377  
 www.tucsonaz.gov/es

Last Bill	Payments (Credits)	Deposits Applied	Adjustments	Balance Forward	New Charges	ACCOUNT BALANCE
\$74.83	-\$74.83	\$0.00	\$0.00	\$0.00	\$65.33	\$65.33

**METER INFORMATION**

Meter Number	Service Type	Start Date	End Date	Current Read	Previous Read	Consumption (Cfs)
7A	07/05/11	08/02/11	2141	2139	2	

**ACCOUNT ACTIVITY**

LAST BILL	\$74.83
TOTAL PAID SINCE LAST BILL	-\$74.83
ADJUSTMENTS	\$0.00
BALANCE FORWARD	\$0.00
<b>NEW CHARGES</b>	
ENVIRONMENTAL SVCS FEES	\$17.24
SEWER VOLUME	\$20.81
WATER VOLUME	\$17.88
MISCELLANEOUS	\$1.50
<b>TOTAL NEW CHARGES</b>	<b>\$65.33</b>
ACCOUNT BALANCE	\$65.33
DRAFT AMOUNT ON 08/23/2011	\$65.33

**IMPORTANT MESSAGE**

On July 5, 2011 Water rate changes approved by Mayor & Council became effective. Questions? Please call 791-3242 (Chalkley Tucson) 400-588-8488.

On July 1, 2011 an increase in sewer rates became effective as approved by the Pima County Board of Supervisors. Questions on the sewer charge portion of your bill, call (520) 740-6000.

Environmental Services charges reflect a fee exchange and an increase in the groundwater protection fee.

**BANK DRAFT - PLEASE DO NOT PAY**

UTILITY SERVICES  
 PO Box 25804  
 Tucson, AZ 85726-8004

Please fold on perforation before mailing and return bottom portion with your payment.

Account Number:  
 Service Address:  
 Draft Date: 08/23/2011  
 Draft Amount: \$65.33  
 Open Space / Riparian Contribution (optional): BANK DRAFT - DO NOT PAY  
 Amount Paid: \$65.33

Tucson Water bill  
 "Open Space/  
 Riparian Contribution"  
 check box

**DRAFT DATE:** 08/23/2011

**DRAFT AMOUNT:** \$65.33

Open Space / Riparian Contribution (optional)

**AMOUNT PAID:** BANK DRAFT - DO NOT PAY

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## 2012 C2E Project Site

### Atturbury Wash Project

- 1 acre restoration & demonstration site
  - native vegetation planted to connect w/ wash
  - 3 basins dug & raised path created

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## 2013 C2E Projects

- **Henry Elementary WINS!** – Wash Improvement and Neighborhood Sustainability submitted by Henry Elementary
- **1st Ave./Seneca Greening and Beautification Project** submitted by the Northwest and El Cortez Neighborhoods
- **Mitchell Park Wildlife Habitat & Green Infrastructure Project** submitted by the Mountain/1st Ave Neighborhood



## Application Packet

- Due April 11, 2014
- Can submit paper or electronic copy
- Application
  - Project Description
  - Site Map and Design Diagram
  - Budget
  - Planning Timeline
  - Letters of Support



## Non-negotiable project components

1. The project must be **located in the Tucson Water service area.**
2. The project site must have a **demonstrated connection** to a designated urban wash or riparian area.
3. The requested C2E funds **may not exceed \$7,500.**
4. All land owners affected by the project site must sign a **letter of support** for the proposed project.

## Important Notes for Application

- “Additional Information” doc provides details on the Application Questions (p.5 &6)
- Evaluation Criteria matches up w/ Application Questions (p.8)
- Section 4: Site Map & Design Diagram (p.6)
- Section 5: Budget (p.6)
  - Fiscal agent required to manage funds & submit reimbursements
  - Ancillary not to exceed 20% (permits, tools, stipends)
  - Matching not required, but helpful (volunteer time, expertise, tools)

# Scoring Rubric\*

\*This table and other helpful information is available in the “C2E Project Application Information” companion document.

Section 1: Project Description		
Site need is clearly stated and relevant to local issues (Q1)		
Proposed project improves ecosystem (Q1)		
Connection with urban washes & riparian areas (Q2)		
Project outcomes aligned with C2E goals (Q3)		
Section 2: Water Resources		
Water conservation practices clearly described and reasonable (Q4)		
Onsite water resources improved to enhance natural environment (Q5)		
Section 3: Community Investment		
Organizational support clearly described and sufficient for project plan (Q6)		
Outreach clearly described including neighborhood engagement & education and volunteer commitment (Q7)		
C2E participant commitment (Q7)		
Maintenance plan is clearly described & effective (Q8)		
	<b>Narrative Subtotal</b>	/50
Section 4: Site Map & Design Diagram (25 points) (Q9)		
Site map includes project area boundaries and design clearly depicts relation to major intersections		
Proximity to wash/riparian area clearly illustrated		
Site is publicly accessible & highly visible		
Design diagram clearly illustrates project components		
Design diagram illustrates site need and project benefits		
	<b>Map Subtotal</b>	/25
Section 5: Budget (20 points)		
Fiscal agent identified & verified		
Ancillary project needs don't exceed 20% of total project budget		
Budget requests are reasonable and within category limits		
Appropriate scope of work for budget		
	<b>Budget Subtotal</b>	/20
Section 6: Timeline (5 points)		
Tasks are clearly defined & timeline reasonable		
Optional: Matching support (funds and volunteer time) included, innovative project design, or demonstrated exceptional value to community		
	<b>Timeline Subtotal</b>	/5
	<b>Bonus (up to 5 points)</b>	
	<b>Total Project Score</b>	/100

# Community Investment

Grant recipients are responsible for helping to promote the Tucson C2E program

- Outreach materials are available on the C2E website and in hard copy by request
- C2E staff are available to aid outreach efforts or make community presentations

Conserve to Enhance is a unique program that motivates consumers to use water more efficiently by linking voluntary water conservation efforts with environmental enhancement projects in their community and region. Once C2E is established in your community, participating water customers:

- Conserve water at their home or business
- Compare current and past water use with our free C2E Water Use Dashboard
- Donate the monetary value of water saved to enhance the environment.

How it Works

Participants who enroll in Conserve to Enhance voluntarily donate the cost savings on their water bill resulting from water conservation to an environmental enhancement fund to benefit local projects.

[wrrc.arizona.edu](http://wrrc.arizona.edu)

# Community Enhancement Project Examples

Lisa Shipek, Watershed Management Group (WMG)  
[lisa@watershedmg.org](mailto:lisa@watershedmg.org)



# Green Infrastructure Permitting

Gary Wittwer, City of Tucson  
[Gary.Wittwer@tucsonaz.gov](mailto:Gary.Wittwer@tucsonaz.gov)

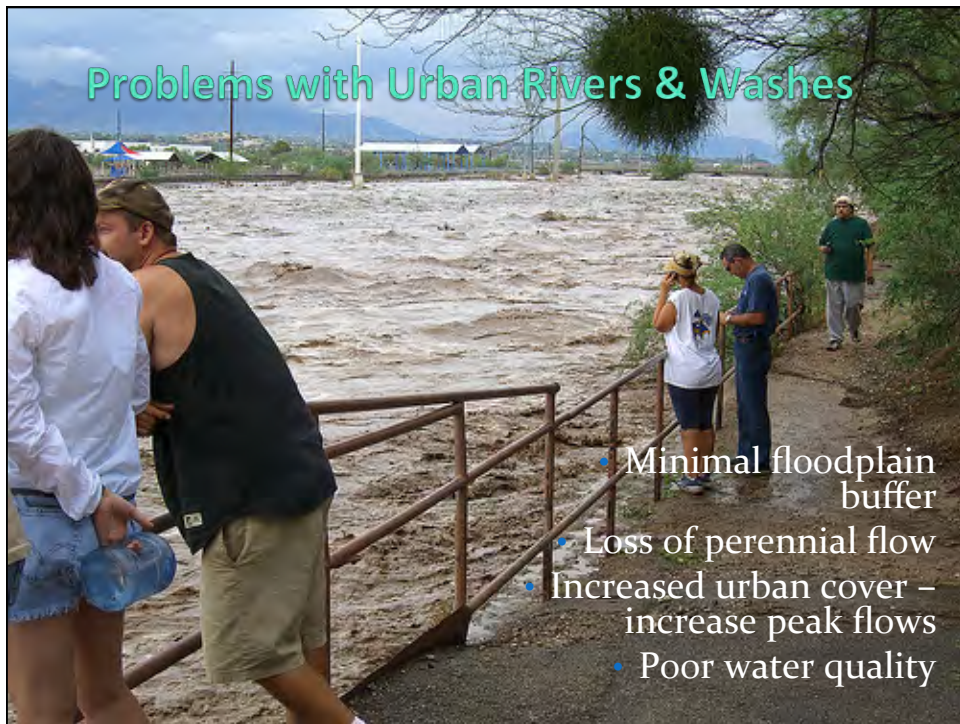




# C2E Example Projects: Neighborhood Green Infrastructure and Wash Restoration

Lisa Shippek

Executive Director, Watershed Management Group



## Problems with Urban Rivers & Washes

- Minimal floodplain buffer
- Loss of perennial flow
- Increased urban cover – increase peak flows
- Poor water quality

## Goals of Neighborhood C2E Projects

- Increase native vegetation near washes and rivers to expand habitat, cool temperatures, and slow and sink stormwater
- Increase soil moisture near washes/streams to support native habitat plants
- Reduce runoff and associated pollutants that ends up in washes
- Beautify areas near neighborhood washes to create a community resource
- Reduce erosion and sedimentation in smaller tributaries

## Projects C2E Will Fund

- Green Infrastructure along streets, parking lots, parks, or public spaces like churches and schools
  - Prioritize projects within 400 feet of neighborhood wash
  - Prioritize projects in areas of concentrated flow or flooding
- Habitat restoration along/near washes
- Restoration in tributary washes or upland drainages



## What C2E Will Not Fund

- Grey infrastructure
- Bank stabilization with concrete
- Water harvesting on residential properties
- Green infrastructure far away from washes/streams
- Tree planting projects that don't incorporate rainwater or stormwater harvesting
- Projects that use non-native vegetation
- Projects that only do education or design

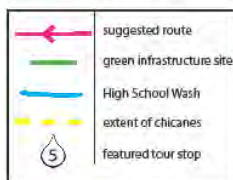
## Sample Projects

## Tributary Washes, Upland Drainages

- “Natural” erosion control features like Check dams, Zuni Bowls, Rock Run-downs with associated plantings



### Rincon Heights Neighborhood - Green Infrastructure Sites



#### Tour stops

- 1. Feld Davis Park**  
In 2009, community volunteers from Rincon Heights neighborhood (RHNA) and Watershed Management Group (WMG) transformed this abandoned lot into a pocket park demonstrating water harvesting from streets, native plants, and a decorative wall built of straw bales.
- 2. Extreme Driveway Makeover**  
Rainfall runoff from this property used to erode sediment from the landscape and driveway into Martin Ave. To stop the erosion and take advantage of the runoff, berms were constructed that direct runoff into a reinforced swale and gravel-filled trench, allowing rainwater to percolate deeply into the soil where it can feed native trees and shrubs.
- 3. 9th St. Chicanes**  
80 of these features (also called curb extensions or bump-outs) were installed along 9th and 10th Street between Campbell and Park Avenue. The chicanes slow traffic by constricting the travel lanes, and also



**4. Curb cuts & basins, 8th St/Fremont Ave**  
Both the northwest and northeast corners of this intersection were retrofitted with curb cuts and basins to capture the abundant stormwater that flows along 8th St.

In rain storms. The basins are planted with native bunch grasses, shrubs and deciduous desert willow trees that provide summer shade but allow winter sun to hit the University of Arizona's greenhouses (NW corner) in the winter.

**5. Parking Lot Swale**  
Parking lots generate a lot of stormwater runoff, sending oil and other car-related pollutants downstream. At this site, the UA installed a long swale to capture runoff

Route length: 1 mile

Time needed to walk route: 1 hour

Time needed to bike route: 1/2 hour

## Right-of-Way (ROW) GI















## Money can be used for:

- Contractors for planning, designing, and installing features
- Permits
- Materials: rocks, mulch, plants
- Curb cuts
- Temporary watering and irrigation
- Signage
- Maintenance

# Typical Costs

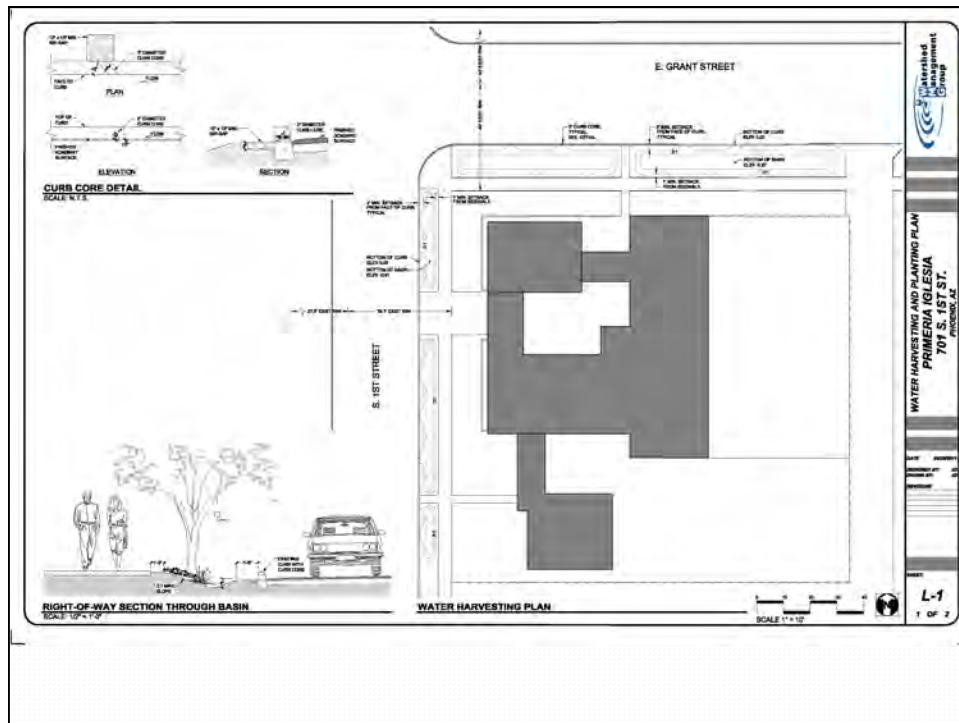
- 1 block Green Infrastructure: \$2,000
- Design/Build Contractors: \$50 - \$100/hr
- Excavator: \$100/hr
- Right-of-way permit: \$50/block
- Curb Core: \$50
- Curb Cut: \$200
- Chicane: \$5,000
- Traffic Circle: \$10,000



Right-of-way landscape plan for 1137 N Dodge Blvd  
 Property Owner: Watershed Management Group  
 Contact: Catlow Shipek, [catlow@watershedmg.org](mailto:catlow@watershedmg.org), 520-396-3266x1

**1137 N Dodge Blvd**  
**Project Scope:** Improve property right-of-way which includes:

- Adjust streetside landscape grade to direct roadside runoff to flow along vegetated edge closer to property line. Blue dashed line indicates desired flow path
- Protect soil surface currently eroding with layer of 2" decorative gravel applied to landscaped right-of-way and driveways.
- Plant native and desert-adapted trees and native bunch grasses to vegetate planting zone of right-of-way. Trees (species indicated) will provide shade to street and property. Native Bull grass will help stabilize soil and filter stormwater pollutants.



## Resources for GI and Restoration Projects

- Organizations/Individuals for Design-Build Projects:
  - Watershed Management Group, Catlow Shipek, watershedmg.org, 520-396-3266
  - Tucson Audubon, Kendall Krossen, tucsonaudubon.org, 520-629-0510
  - Ethos RainWater Harvesting, Lincoln Perino & Jeff Rhody, 520-369-2376, info@ethosrainwater.com
  - Ahimsa Landscaping, Justin Bramhall, 520-345-1906, ahimsalandsaping.com
- Design
  - Wheat Scharf, Laura Mielcarek, wheatscharf.com, 520-884-7911
- City /County
  - City of Tucson, Department of Transportation, Gary Wittwer
  - Pima County Flood Control, Evan Canfield
- Contractors
  - Lil John's Excavating
  - Custom Saw Cuts

Green Infrastructure for Southwestern Neighborhoods



Watershed Management Group  
Version 1.0  
July 2010



3:1 Shallow slope  
Existing Curb w/ Curb Cut  
Street Level  
Water level  
2"-4" Mulch Layer

9' Min  
8' Min Pedestrian Access

**B** SHALLOW BASIN W/ PLANTING  
1/2" = 1'-0"

Watershedmg.org

