

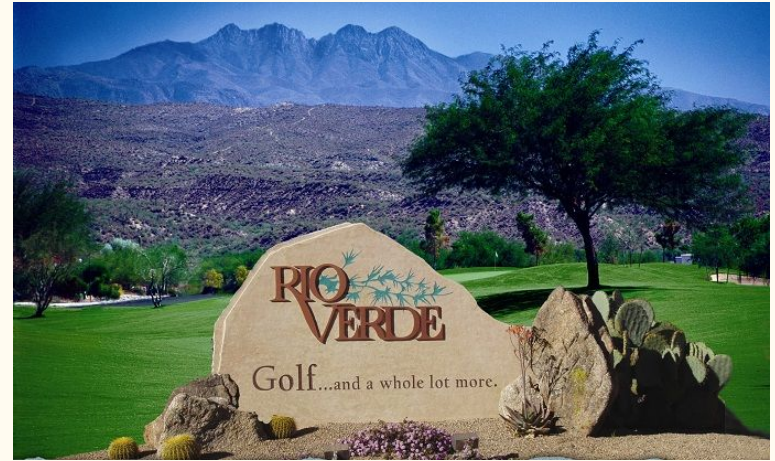


Rio Verde Recycling Metric

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Rio Verde Community - Info

- Certified Sustainable Community per Audubon International's standards
- Around 1400 residents
- Around 1000 homes
- Community Center and Country Club
- Community Garden
- 2 golf courses and various rec areas



Stakeholders

- Sal Celona - Rio Verde Sustainability Coordinator
- Kevin Waring - Rio Verde Rep
- Mark Rodermund - Republic Services (Manages Rio Verde's Waste)
- Doris Findling - Executive Director, Rio Verde community
- Joanna Nadeau- Audubon International Organization
- Traci Conaway- Recycling Coordinator, City of Chandler



Scope/Objectives

1.2 PURPOSE / OBJECTIVES

· *Rio Verde Community Sustainability Monitoring Program Goal: to develop and apply a set of indicators to monitor and document Rio Verde's performance as a certified sustainable community per Audubon International's standards.*

*1. Identify and collect raw data and information for each metric, specifically **recycling efficiency**. This information will need to be retrieved from a number of different sources.*

2. Create a central ledger or series of spreadsheets where raw data can be inputted. Ideally a user could enter the data into a simple form that automatically adds the data to the ledger/workbook. The data needs to be entered in a format where it can be compiled and summarized.

3. Perform an analysis of this data both to review past performance and trends since 2010 and, in the future, to evaluate and compare to previously collected data. The analyses of metrics will be used to determine the overall sustainability program status in terms of its ability to attain its anticipated goals and objectives.

4. Apply resulting analysis showing an annual/year-end summary for each metric/indicator to update the Rio Verde Community Long Term Sustainability Plan and tracking system.

5. Suggest future recycling strategies.

Overview: Steps of your research project

1. We visited Rio Verde, and researched their recycling involvements and habits
2. Conducted a problem analysis on the importance of metric systems in recycling, the ecological impacts of not-recycling, small-community based recycling programs, and a current state analysis.
3. Researched different recycling metric options
 - a. Decided which one was the best fit for Rio Verde
4. Obtained data from recent annual E-waste/shredding event
5. We conducted a simple recycling metric for Rio Verde to use



Problem Analysis Findings

Ecological impacts (of not recycling)

Landfills:

- Hazardous gas emissions
 - Plant asphyxia
- Groundwater pollution
 - Leachate

Increased plastic/paper production

- Deforestation
- More hazardous gas emissions → global warming



Coconut Creek

CITY GREEN PLAN REPORT

2012



- The Coconut Creek Green Plan Report is one example of an Audubon certified community in Florida and how they use metrics to track their progress.
- The report is created annually and focuses on seven environmental themes; energy, water, urban design, urban nature, waste reduction, transportation, and climate change.
- The metric they use is a spreadsheet called Action Steps, divided by category and includes; Action Objective, Action Summary, and a numerical Performance Measure for each step.
- There are between three and nine steps in each category.

Coconut Creek's Action Steps for Recycling

Action Steps

Results of each action step under Category 5

Category 5: Waste Reduction and Recycling

	ACTION OBJECTIVE	ACTION SUMMARY	PERFORMANCE MEASURE	2009	2010	2011	2012
5.1	Increase recycling throughout the City by 25% by 2014 and 50% by 2020.	Status: <input checked="" type="checkbox"/> In progress Target Date: 2014 / 2020 Data Sources: Public Works Dept. Note: Average capture rate ratio is based on best available data from All Service Refuse.	# of single stream recycling containers purchased	8,000	809	0	0
			# of single stream recycling containers distributed	0	8,000	10	175
			Average capture rate ratio (estimated)	13%	17%	21%	26%
			# of participants in paint recycling program	67	54	40	65
5.2	Create a "user-friendly" composting program by 2012 to reduce solid waste disposal.	Status: <input type="checkbox"/> Undetermined Target Date: 2020 Data Sources: *	Creation of composting program	*	*	*	*
			# of properties using composting	*	*	*	*
5.3	Require all construction and demolition debris to divert 75% of waste from landfills.	Status: <input type="checkbox"/> Undetermined Target Date: 2020 Data Sources: *	Code revision completed	*	*	*	*
			# of demolition permits	*	*	*	*
5.4	Create a paper shredding program for the community by 2010.	Status: <input checked="" type="checkbox"/> Achieved Target Date: 2010 Data Sources: Police Dept, City Clerk Note: (1) Program was created in 2011 (2) Program has been continued through the PD and will be monitored yearly.	# of participants	*	*	78	508
			lbs. of paper shredded	*	*	12,285	28,595

Challenges Faced

- Time constraints
- Distance from ASU campus
- Past recorded data on recycling is lumped together with other communities
- Lack of recycling data
- Rio Verde fluctuating population
- Community privacy concerns



Recycling in Rio Verde

FOCUS AREA	PRIORITY	GOALS & OBJECTIVES	POLICIES, PRACTICES OR STRATEGIES	UPDATED TIMELINES	RESPONSE/ INDICATORS*	2015 RESULTS
Environment, cont.	Primary					
Recycling		G3. Reduce waste generated by residents and RVCA/RVCC	P3. We currently have co-mingle recyclables collected on a weekly basis and collect hazmat electrical appliances and shredding once a year.	Spring 2015	I3. Conduct shredding/electric appliance recycling program	Reports on results from April 24, 2014 event are available at the RVCA office.
♻️ Recycling/Reuse		♻️ Maximize recycling ♻️ Encourage reuse of unwanted materials		April 24, 2015	♻️ Annual hazmat recycling and shredding event	Conducting shredding and electronic recycling event We reuse bituminous materials from existing roadways as a base course to ne “Remove and Replace” projects. CRC hosts annual yard sale Newsletter has section on used items for sale Donations to Sunshine Acres of furniture/golf carts/appliances

- Hold yearly recycling event (gather e-waste, shred material, and bulk trash)
- Each home is equipped with a recycling bin

Metric

[illegible][illegible]

Recycling - Moving Forward

- Gathering more info on recycling and waste tonnage and percentages
- Work with Republic Services to further obtain data (Mark Rodermund is doing a great job here already)
- Set numerical goals
- Distribute educational information sheets to new and current residents about ongoing sustainability efforts
- Label recycling bins with infographic (like ASU)
- Expand recycling bins and information to communal areas
- Paint program?
- Getting fire department recycling info to put in metric



Thank you!

Questions????