

# Green Solid Waste Management

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Recycle Florida Today – June 8, 2004

## Planning for the Future

- Putting the Waste Issue on the Forefront
  - Use Vision Based Planning to set Inspirational Goals
  - Identify Opportunities
  - Invest in Community Resource Utilization

## Actually Waste IS in the Forefront

- Energy Conservation
- Job Creation
- Economic Development
- Future Land Use Planning
- Community Health
- Sustainable Development

## Vision & Leadership

Vision to develop the future we want

Vision compelling enough to inspire others

## **Leadership To**

- Make interdisciplinary connections
- Address issues broad in scope
- Work at multiple scales & across boundaries
- Work with limited resources
- Mobilize partners and stakeholders
- Work for meaningful outcomes

## **Vision Based Planning Involves**

- Long-term focus with short-term steps
- Comprehensive / simultaneous solutions
- Public and private sector collaboration
- Place-based actions at multiple scales
- Stakeholder Involvement

## Big, Positive Vision: Resource Sustainability

- Waste Management Professionals become Resource Utilization Professionals
- The Concept of Waste is Outdated and No Longer Used to Describe Previously Used Resources

## Resource Utilization Leadership

- Utilize Waste, Not Manage It
- Design Out Waste “Upstream, Mid-stream & Downstream”
- Partner with Business to Share Responsibility For Products & Packaging
  - Focus On Delivering Services, Not Products
  - More Services With Less Energy & Material
- Focus on Economic Development
  - More Jobs (1.1 Million In Recycling Alone In U.S.)

## Can We Think That Grand and Design Out Waste?

Businesses Have Achieved >90% Waste Diversion

Local Governments Have Achieved Greater than 70% Waste Diversion

## ZERO WASTE BUSINESSES [www.GRRN.org](http://www.GRRN.org)

- Amdahl Corp.
- Battery Council International
- Brewers of Ontario
- Collins & Aikman
- Epson (OR)
- Fetzer Vineyards
- Hewlett-Packard (Roseville, CA)
- Interface
- Mad River Brewery
- Namibian Breweries (South Africa)
- Pillsbury
- Xerox Corp
- Zanker Road

## Outstanding Programs

Community Name	Residential Diversion Rate	Highlighted Program	Financial Implications per HH
Marin County	72% (commercial & Residential)	Pay-As-You-Throw, Dirty Commercial MRF, Competition	\$19/month \$240/year
Chatham, NJ	65%	Pay-As-You-Throw	HH Costs reduced 50%
Falls Church, VA	65%	Block Leaders Materials Collected	HH Costs reduced 50%
Bellevue, WA	60%	Pay-As-You-Throw	
Loveland, CO	56%	Pay-As-You-Throw	Increased Costs
Clifton, NJ	56% (comm. - 68%)	Local Ordinances & Costs	HH Costs Remained Same
Worcester, MA	54%	Pay-As-You-Throw	HH Costs Reduced
Bergen County, NJ	54%	Established Markets & Costs	
Leverett, MA	53%	Pay-As-You-Throw	HH Costs Reduced
Dover, NH	52%	Pay-As-You-Throw	HH Costs Reduced
Crockett, TX	52%	Clear Trash Bags & Enforcement	HH Costs Reduced
Ann Arbor, MI	52%	Curbside & Enforcement	HH Costs up 10% - Tipping fee up 70%

## Set Community Goals

- Use Vision Based Planning Tools to Set Community Goals for Future Waste Diversion REGARDLESS of Federal or State Leadership

## Why Set Goals?

- Provides planning and management guidelines, principles and policies that drive programs in the planned direction
- Move in same direction by unifying dept. staff, county personnel, citizens
- Clear communication to users and vendors

## Why Set Goals?

- Inspiration and motivation
- Community leadership & vision
- Shape design of future programs and infrastructure
- When you don't know where you're going, any road will do

## State Goals

- Florida 30% by 1994
- 14 States have a goal of 50%
  - 9 of them by 2001
- 11 States have goal of 40% or more
  - All of them by 2001 or before
- New Jersey 60% by 2000
- California Zero Waste Vision
  - 50% by 2000

## Set Community Goals

- Use Vision Based Planning Tools to Set Community Goals for Future Waste Diversion REGARDLESS of Federal or State Leadership

## An Inspiring Goal

- 100% Waste Reduction, Reuse, Recycling and Composting or Darn Close
  - Recognizes Waste as a Symptom of Inefficiency
  - Investment in waste disposal impedes entrepreneurs, businesses and governments from innovations in waste prevention, reuse, recycling and composting.

## Communities with Zero Waste Goals

- New Zealand 1<sup>st</sup> Nation to Adopt
- 1/2 Of New Zealand Cities
- Winter Olympics 2002
- Seattle, WA
- Halifax, Nova Scotia
- Carrboro, NC
- Canberra Australia
- CA Adopted In CIWMB Strategic Plan
- San Francisco, CA
- Del Norte County, CA
- Santa Cruz County, CA
- San Luis Obispo County, CA
- Burbank, CA

## Identify Opportunities in Common Community Challenges

- Lack of markets
- Lack of incentives
- High perceived costs for waste diversion vs. waste disposal
- Perception that people are unwilling to change

## Lack of Markets = Market Development

- Funding (Leverage Community Reinvestment and Economic Development Strategies)
- Environmental Purchasing
- Green Buildings
- Create positive community climate for entrepreneurship
- Invest in community infrastructure to fill service voids – e.g. Resource Recovery Parks

## **Lack of Incentives = Create Local Incentives**

- Change Economics So What Was Marginal Is Now Economic
- Pay For What You Want: Waste Prevention, Reuse, Recycling & Composting
- Don't Pay For Wasting (Or Much Less)

## **Create Incentives**

- Restructure Marketplace To Encourage Waste Prevention, More Reuse, Recycling & Composting: RFPs & Contracts, Rates, Ordinances, Land Use Permits, Facility Permits, General Plans, Zoning, Policies, & Definitions
- Tax Bads, Not Goods

## Minimize Curbside Recycling Costs; Maximize Avoided Garbage Costs

- Make Garbage System Flexible
- Minimize/avoid long-term fixed cost commitments for disposal facilities.
- Offer customers reduced collection frequency service options at reduced fees.
- Negotiate/specify collection contract or manage collection system so that routes can be lengthened, fleet size reduced, and costs decreased as garbage collection quantities decrease due to increased 3Rs.

## Make Recycling System Efficient

- Maximize amount collected at each stop.
- Match recycling collection frequency/convenience with garbage collection frequency/convenience.
- Make household/business recyclables sortations consistent with collection equipment and processing facility capabilities.
- Match recycling collection container capacity to collection frequency and volume of materials recycled.



Reasonable Estimates for the  
Costs of Pollution Indicate That  
Recycling Costs Less Than  
Garbage



Disposal Costs Should Include  
Energy and Pollution Costs –  
Recycling Creates

- Net Energy Use Reductions
- Net Greenhouse Gas Reductions
- Net Acidification Potential Reductions
- Net Eutrophication Potential Reductions
- Net Human Toxicity Potential Reductions

## Australian Kerbside Study: Recycling Costs Amount to Just 38% of Dollar Value of Net Environmental Benefits

- Environmental Benefits:
  - 75% from upstream air & water pollution decreases
  - 21% from upstream land use reductions & future resource access improvements
  - 4% from global warming credits
  - 2% from reduced land use for landfills
- Environmental Costs:
  - 2% from increased truck traffic

## Perception that People are Unwilling to Change

- Involve your Stakeholders
- Share Your New Vision
- Set Goals Together
- Educate and Give Incentives
- Provide On-going Involvement and Feedback

## Traditional Solid Waste Management Considerations

- Cost effective
- Convenient to all residents & businesses
- Accountable
- Customer-friendly

## Additional Green Resource Utilization Considerations

- Flexible
- Sustainable
- Environmentally Friendly
- Supports value-added jobs and businesses
- Vitalizes local economy

## What If We Don't Set New Community Goals?

- Plan More Land for Landfills & Incinerators
- More Public Subsidies For Landfills, Incinerators, Monitoring and Clean-up
- Mining & Manufacturing Impacts Continue
- Need 3-6 More Planets For U.S. Lifestyle To Be Replicated

## Closing Quote

- "To waste and destroy our natural resources instead of increasing their usefulness, will undermine the very prosperity which we are obligated to hand down to our children, amplified and developed."

– Theodore Roosevelt, 1907

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