

To: Wisconsin Recycling and Waste Management Program Leaders

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RE: Research Review of Best Practices in Campaigns to Promote Recycling

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Summary of Recommendations for Recycling Campaigns

This literature review, sponsored by the Brown County Waste Advisory Group, summarizes existing research on best practices for conducting effective communication campaigns targeting residential households to improve recycling rates. The purpose is to apply this understanding to inform the design and implementation of recycling initiatives in Wisconsin.

Key strategies for successful recycling outreach campaigns include the following:

- Mobilize people from the community to promote recycling behaviors. All research indicates face-to-face communication (e.g., family, friends, neighbors, work colleagues) produces higher recycling rates than mediated communication such as flyers or advertisements. People respond better when they trust the source of information. Often a greater degree of trust can be developed through face-to-face communication.
- Emphasize environmental benefits (e.g., conserving natural resources or minimizing the impact of extracting raw materials) and saving landfill space (e.g., minimizing need to construct more landfills and pollution impacts associated with landfills). Economic considerations (e.g., reducing collection and disposal costs, increasing jobs) rate lower as motivations for recycling.
- Consider targeting younger audiences, renters and minorities (if these groups are prevalent in targeted neighborhoods) because previous research indicates that older people, homeowners and whites are already more likely to recycle.
- Use messages emphasizing social norms (group-held belief about how members should behave in a given context) in outreach campaigns to promote recycling. Particularly when people aren't sure what to do, they look to others when deciding how to act.
- Print sources can be effective but work better in combination with other strategies.

- Keep it simple – use more pictures and less text. It's not likely that unmotivated individuals will read a lengthy printed recycling guide.
- Consider policies known to increase recycling, such as variable pricing of waste disposal, and enactment of recycling ordinances. Individual level incentives can also influence recycling performance.
- Convenience of receptacles alone, without education or additional promotion, results in significantly more recycling in public places and at events.

Outreach Strategies

Outreach Strategies With High Impact On Recycling:

- Convenience/availability of receptacles (Barr 2004; Do Valle et al., 2004; Davis et al., 2006)
- Cart hangers
- Door hangers
- Email
- Face-to-face communication (through family/friends or work/school) and door-to-door outreach is the most effective medium to get people to start recycling (Nixon & Saphores, 2009; Schultz et al. 1995; Read 1999; Tucker & Speirs, 2002), though it is more expensive. However, given the goal is to increase recycled tons, this strategy may actually be cheaper per ton diverted than less expensive outreach methods, which may be less effective. Personal visits also result in greater retention of behaviors over time.
- Recycling education campaigns conducted by local community groups were more effective than newspaper and radio advertisements (Folz & Hazlett, 1991).
- Provide recycling information from multiple sources (Nixon & Saphores, 2009).
- Use social norms messaging (e.g., "Your neighbors are already recycling. Are you?"; "Join your neighbors in recycling to protect the environment").

Outreach Strategies: Effective Messaging Elements

- Preferred words were "easy", "natural resources", "smart", "natural", "future", "benefits", "conscientious", "simple", "convenient", and "responsible".
- Strong, resonating motivators center on saving resources and benefiting future generations.
- Public recognition for participation should be an important aspect of outreach.
- Explain end uses for recyclables.

Outreach Strategies: Ineffective Messaging Elements

- “Jobs”, “economy,” and “climate change” didn’t work for recycling messages. People do not see a strong link between recycling/diversion actions and impacts on greenhouse gas emissions or job creation. Trying to “sell” recycling as a way to reduce climate impacts does not appear to be an effective message.

Outreach Strategies: Recycling Barriers

- Unaware of what materials can/can’t be recycled (e.g., junk mail, paper board, glossy magazines, ‘atypical’ plastic containers, plastic bags)
- Not sure that collected materials are actually being accepted for recycling
- Requirement for preparation of recyclables (e.g., taking paper off cans, rinsing containers)
- Lack of self-efficacy (e.g., do I know what to recycle or not?)
- Lack of room to store bin, especially in rental residential units

Outreach Strategies: Motivations

- Good for the environment (conserving natural resources or minimizing the impact of extracting raw materials) (Park & Berry, 2013; Scott, 1999)
- Saves landfill space (Scott, 1999)
- Conserves natural resources (Nixon & Saphores, 2009)
- Cleaner neighborhoods
- “A good feeling”
- “Doing my part”
- Show end uses/products of recycled materials
- There is a pervasive pattern across studies showing that participation in recycling is strongly correlated with knowledge of what and how to recycle.
- Participants reported that although they personally recycle, their neighbors may be unaware of it. This implies that visible labels like big star stickers on recycling cans, or labels that say “I compost too” or similar messages will help send positive messages and motivate behavior change.

Outreach Strategies: Disincentives

- Interestingly, people who agree that recycling creates jobs are less likely to recycle (Nixon & Saphores, 2009)

Target Audiences

Target Audiences: Individuals More Likely To Recycle

- Women (Ando & Gosselin, 2005; Barr, 2007; Oates & McDonald, 2006)
- Older adults (Barr 2007; Jenkins et al. 2003; Nixon & Saphores, 2009; Sidique et al., 2010)
- Larger households (e.g. Ando & Gosselin, 2005; Nixon & Saphores, 2009)
- Higher education (Sidique et al., 2010; Owens, Dickerson & Macintosh, 2000)
- White (Johnson et al., 2004)

Target Audiences: Individuals Less Likely To Recycle

- African Americans (Johnson et al., 2004, Nixon & Saphores, 2009)
- Foreign born Latinos (Johnson et al., 2004)
- Renters (Nixon & Saphores, 2009; Owens, Dickerson & Macintosh, 2000)

Target Audiences: Possible Reasons for Disparities in Recycling Rates by Neighborhood

- Lower owner occupancy and, therefore, a more transient population
- Residents have lower average incomes and, as a result, may generate less newsprint and magazines to recycle and may take their aluminum cans to scrapyards for cash.
- Different sized bins/carts (e.g., households with smaller bins may recycle less)

Target Audience Differences

- Low recyclers, though they tend not to recycle newspapers, plastics and other items, are more likely than medium to high recyclers to recycle aluminum cans and materials where they can collect immediate cash incentives. To that end, low recyclers appear to be more motivated by “what’s in it for me?”
- Low recyclers are motivated more by convenience versus environmental reasons. Social norms may be less effective with low recyclers because their reference groups care less.
- Medium to high recyclers don’t usually recycle for cash incentives, but are more interested in the broader picture—the environment, concern for neighborhood cleanliness and “doing the right thing.”
- Among those who recycle at medium to high levels, neighbors’ perceptions appear to be a greater influence, suggesting social norms are more likely to increase recycling rates and types of materials recycled for neighborhoods with already established recyclers.

Other Considerations

Policy incentives

- A program in Cambridge, Massachusetts, gave residents the opportunity to increase the amount recycled over the previous year and earn money for neighborhood beautification and youth activities.
- Variable pricing can be an effective policy tool for increasing the amount of recycling and reducing waste generation. Regulations can also be an effective means of increasing recycling. Enactment of recycling ordinances that make residential recycling mandatory also increases the rate of recycling (Park & Berry, 2013; Sidique et al., 2010).

Social Norms

- One study of a campaign designed to increase recycling used Public Service Announcements (PSAs) portraying a scene in which the majority of depicted individuals engaged in recycling and spoke disparagingly of a single individual in the scene who failed to recycle (Griskevicius, Cialdini & Goldstein, 2008). When, in a field test, these PSAs were played on local TV in four Arizona communities, a 25.4% net advantage in recycling tonnage was recorded over a pair of control communities not exposed to the PSAs but whose recycling was also measured during the length of the study. Another way to leverage social norms in promoting recycling behavior might be to increase visibility about the growing prevalence of others who have adopted a particular recycling practice (Shultz, 2002).

Sources

- Typically, it is preferable to choose a source to deliver your message that is similar to your target audience, such as neighbors or friends. Focus groups in Milwaukee also found people would be receptive to listening to volunteers about recycling (because they are unpaid people showing they care), or leaders in their community such as the mayor, aldermen and other public officials.

Cautions

- Don't confuse the most common sources of recycling information with the most useful sources of information. The prevalence of print for conveying information about recycling should not be surprising since it is generally cheaper than other media, and it leaves a record of usable information (Nixon and Saphores, 2009).

References

- Ando, A.W. and Gosselin, A.Y., 2005. Recycling in multifamily dwellings: does convenience matter? *Economic inquiry*, 43 (2), 426–438.
- Barr, S., 2007. Factors influencing environmental attitudes and behaviours – a UK case study of household waste management. *Environment and behavior*, 39 (4), 435–473.
- Folz, D.H. and Hazlett, J.M., 1991. Public-participation and recycling performance: explaining program success. *Public administration review*, 51 (6), 526–532.
- Griskevicius, V., Cialdini, R. B., & Goldstein, N. J., 2008. Social norms: An underestimated and underemployed lever for managing climate change. *International Journal of Sustainability Communication*, 3, 5-13.
- Jenkins, R.R., et al., 2003. The determinants of household recycling: a material-specific analysis of recycling program features and unit pricing. *Journal of environmental economics and management*, 45 (2), 294–318.
- Johnson, C.Y., Bowker, J.M., and Cordell, H.K., 2004. Ethnic variation in environmental belief and behavior: an examination of the new ecological paradigm in a social psychological context. *Environment and behavior*, 36 (2), 157–186.
- Nixon, H. & Saphores, J.D.M., 2009. Information and the decision to recycle: results from a survey of US households. *Journal of environmental planning and management*, 52, 257-277.
- Oates, C.J. & McDonald, S. 2006. Recycling and the domestic division of labour. Is green pink or blue? *Sociology*, 40, 417-433
- Owens, J., Dickerson, S. & Macintosh, D.L., 2000. Demographic covariates of residential recycling efficiency. *Environment and Behavior*, 32, 637-650.
- Park S. & Berry, F.S., 2013. Analyzing effective municipal solid waste recycling programs: the case of county-level MSW recycling performance in Florida, USA. *Waste management and research*, 896-901, 31, 9.
- Recycling Focus Groups Report, 2008. Staples Marketing Communication Prepared for City of Milwaukee - Department of Public Works.
- Read, A.D., 1999. A weekly doorstep recycling collection, I had no idea we could!’’ Overcoming the local barriers to participation. *Resources conservation and recycling*, 26, 217–249.
- Shultz, P. W., 2002. Knowledge, information, and household recycling: Examining the knowledge deficit model of behavior change. In T. Dietz & P. Stern (Eds.), *New tools for environmental education* (pp. 67-82). Washington, DC: National Academy Press.
- Schultz, P.W., Oskamp, S., and Mainieri, T., 1995. Who recycles and when? A review of personal and situational factors. *Journal of environmental psychology*, 15, 105–121.
- Scott, D., 1999. Equal opportunity, unequal results: Determinants of household recycling intensity. *Environment and behavior*, 31, 267-290.
- Skumatz Economic Research Associates, Inc., 2011. [Getting the most from Colorado's Recycling Programs and Infrastructure: Best management practices, impacts and cost effectiveness of social marketing.](#)
- Tucker, P. and Speirs, D., 2002. Attitudes and behavioural change in household waste management behaviours. *Journal of environmental planning and management*, 46 (2), 289–307.