# Community-Based Social Marketing as a Planning Tool

## Community and Regional Planning Masters Project

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**September/2002**

# Special Thanks & Acknowledgements

**People who have been of help:**

Numerous people assisted me on this project with their advice and encouragement. I would especially like to thank my father, Bill Pickens, who by accident or by insight led me to the community-based social marketing model long before I began graduate school. To my mother, Bonnie Pickens, thank you for your editing skills and advice. I can always count on you. Thank you to Jon Deininger for reminding me that the only way to eat an elephant is one bite at a time. To our dogs Zoe and Tumalo, thank you for reminding me to take breaks.

In addition, I would like to thank the staff of The EcoTeam Program, Ellen Santasiero and Elaine Sigvaldsen, for aiding me with decision-making, mailing lists, survey drafting and stuffing, and for being purely honest and supportive through this process. May your new careers blossom and be as rewarding as your time spent with EcoTeam. Ellen, additional thanks is needed for committing to editing this report as part of my exit project committee. To Megan Smith and Andre LeDuc, thank you for serving as the faculty portion of my exit project committee. You are excellent advisors. To Ed Weeks, thank you for your assistance with survey analysis and for aiding in my understanding of the Statistical Package for the Social Sciences computer program. I never knew statistics could be so fun!

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# Chapter 1
# Introduction

## 1.1- Purpose

Community developers and social planners often work as agents for social and individual change. Whether a planner works in an advocacy role attempting to change public policy or, a more neutral role, working to implement existing regulations through a planning approval process, planners influence behavior. Numerous examples of this influence exist (see Table-1).

**Table 1- Where Planners Influence Social/Individual Change**

| CATEGORY | PLANNING EXAMPLES |
|---|---|
| *Regulation* | Zoning, traffic laws, pollution laws, speed limits, ordinances, and codes. |
| *Voluntary Action* | Public outreach and education, recycling campaigns, education, awareness campaigns, and collaboration. |
| *Incentive* | Carpool lanes, rebates, and coupons. |

Not unlike planners, social and environmental psychologists work to understand and promote human welfare. Their research advances knowledge of human factors that contribute to social issues such as environmental degradation and population growth. It is broad issues such as these that planners are often involved in, designing and implementing mitigation programs. These programs are implemented at all levels of the community including neighborhood, city, state, national, and international. Some psychologists are beginning to identify a gap between psychological research and delivery of programs

that planners work on, especially those programs that use voluntary action and incentive approaches to change behavior (D Winter, S. Oskamp, D. McKenzie-Mohr). Although this gap is a perceived problem, psychologists do not emphasize planning related social issues as core to their field. As psychologist Deborah Du Nann Winter points out, "In spite of its talented membership, division 34 (Environmental and Population Psychology) has been and continues to be a very small division of the American Psychological Association (APA), because most psychologists do not see environmental or population problems as central to their work" (D. Winter, p. 516). Instead, this gap could be filled by an interdisciplinary approach. An approach like this would seek to have planners use tools provided by the psychology field to implement social change. Examples would include models, theories, research, and processes developed within the psychology field and applicable to the planning field.

Although planners may be the logical professionals to implement social change, psychologists do have substantial knowledge of human behavior and behavioral change. Theories that have emerged from the psychology field, such as Attitudinal-Behavioral Relationship, Cognitive Dissonance, and Social Diffusion, predict how human behavior is altered through various environmental, educational, and social stimuli. This knowledge should be applied by planners when developing and implementing programs that address a wide variety of planning issues such as public transportation use, water and energy efficiency, solid

waste management, and community or neighborhood building.  One

behavior change model that uses knowledge from the psychology field to

assist planners in program development is called "community-based

social marketing".  Environmental psychologist and professor of social

psychology at St. Thomas University in New Brunswick, Canada, Doug

McKenzie-Mohr developed this model.

The purpose of this report is to analyze the effectiveness of the

McKenzie-Mohr's community-based social marketing model in the

planning field.  The issues of household resource planning,

transportation planning, and air quality management planning are

specifically addressed.  If the community-based social marketing model

proves to be a useful tool for planning professionals, it will serve as an

example of a successful interdisciplinary approach to improving human

welfare.  In addition, positive results may be an indicator that outreach

by planners into social and psychology disciplines will help them design

and implement planning programs that implement complex human

behavioral change.

## 1.2- Organization

The report is organized to give readers a broad understanding of

behavior change theory before reviewing case studies where the

community-based social marketing model is applied.  This chapter,

*Chapter 1-Introduction*, furnishes the purpose and organization of the

report.  *Chapter 2-Methodology* describes the means by which

information was gathered for the report.  *Chapter 3- Behavior Change*

*Theory* provides a history of behavior change science and describes three well-known theories of behavior change. *Chapter 4- Community-Based Social Marketing* describes both the concepts of social marketing and the behavior change model: community-based social marketing. *Chapter 5- The EcoTeam Program and Survey Analysis* is an in-depth study of "The EcoTeam Program", which is an on-going non-profit program in Deschutes County, Oregon, whose mission is to reduce resource consumption at the household and individual levels. This chapter describes the program and provides results from the "Deschutes County EcoTeam Participant Survey". The survey was conducted as original research to aid in analyzing the effectiveness of the community-based social marketing model. *Chapter 6- Case Studies* offers two additional examples of case studies where principles of the community-based social marketing model have been applied to specific planning issues. These case studies parallel two of the report's primary topics, transportation and air quality planning. The first case study, "Go Boulder", presents how the city of Boulder, Colorado, applied community-based social marketing principles to reduce Vehicle Miles Traveled (VMT). "Go Boulder" began in 1989 and is an ongoing program. The second case study, "Air Quality Public Education and Incentive Program", describes a State initiated program to reduce air pollution in Oregon. The program was piloted in Portland, Oregon, over a three-year period, from 1995-1998. *Chapter 7- Analysis and Recommendations* explores the effectiveness of the community-based social marketing model. *Chapter 8- Conclusions* summarizes and

concludes the report.  *Appendix A- Deschutes County EcoTeam Participant Survey* provides a full text of the survey.  It shows raw percentages for each potential answer in the survey.  A transcript from Q-16, a write-in comment question, is supplied.  *Appendix B– Bibliography* provides a complete listing of texts, journals, and Internet websites used to research this report.

# Chapter 2
# Methodology

The purpose of this project is to analyze the effectiveness of the community-based social marketing model as applied to three distinct planning related topics- consumption reduction, transportation, and air quality control. The project utilizes three methods to obtain information: a literature review, a survey, and case studies.

Research was designed so that various methods of information gathering interrelate. The process used is highlighted below:

1. The EcoTeam case study was identified as a program of interest.
2. A literature review on behavior change, social marketing, and community-based social marketing was conducted.
3. It was determined that the EcoTeam Program could provide a case study for this analysis.
4. Other community-based social marketing case studies were identified.
5. A survey instrument was used to provide specific data on the EcoTeam Program and the perceived effect of community-based social marketing principles in the surveyed population.

## Literature Review

Reviews of books, journals, and Internet resources were conducted to gain an understanding of behavior change theory, social marketing approaches, and the community-based social marketing model. A discussion of the findings is provided in Chapters 3 and 4. A complete bibliography is provided in Appendix B- Bibliography.

**Survey**

An in-depth analysis was conducted for The EcoTeam Program, a non-profit organization that serves Deschutes County, Oregon. In addition to describing the program using existing sources, the author designed an original household survey for research purposes. The survey was designed with input from The EcoTeam Program staff and the exit project faculty committee for this report. A first draft of the survey was e-mailed on March 15th, 2002. Comments were received and additional drafts were written and reviewed for the following three weeks. A final draft was accepted on April 9th, 2002. The final product, entitled "Deschutes County EcoTeam Participant Survey", is a four-page, 16-question survey, on 8.5" x 11" paper. Surveys were printed on both sides of white 11" x 17" recycled paper. The survey included 15 multiple-choice questions, six of which included an option to write in an answer of "other", and one of which was "fill in the blank". The final question provided a box for respondents to write in any additional comments about their experience with The EcoTeam Program (see-Appendix A).

Survey recipients were all EcoTeam Program participants living in Deschutes County, Oregon. The EcoTeam Program staff randomly chose recipients using files kept for record purposes. Surveys were mailed on April 24, 2002. A deadline of May 10, 2002, was set for returning the surveys, but surveys were accepted through May 15,

2002.  Of the 250 mailed surveys, 40 were returned by the post office

because of changed or incorrect addresses and 76 completed surveys

were returned.  This yields a response rate of 36.0%.


### Case Studies

In order to locate case studies that applied community-based social

marketing principles, the author used a website (www.cbsm.com)

provided in the book *Fostering Sustainable Behavior- An Introduction to

Community-based Social Marketing*, by Doug McKenzie-Mohr and

William Smith.  This website houses hundreds of case studies where

the community-based social marketing model is applied.  The two case

studies chosen for this project are:  "Go Boulder" and "Air Quality

Public Education and Incentive Program".  They were chosen because

they exemplify application of the model to planning related issues.

# Chapter 3
# Behavior Change Theory

## 3.1- Historical Roots of Behavior Change Science

The community-based social marketing model is based on behavior change science and theory; therefore, it is essential to gain an understanding of this science in order to evaluate the effectiveness of the model. The following chapter summarizes findings of a literature review on behavior change science and theory.

Formal study of behavior and choice emerged in the late 19th and early 20th centuries. During this time period, the work of Russian physiologist Ivan P. Pavlov was particularly significant. Pavlov experimented with digestive systems in dogs and found that certain stimuli in the environment, such as noise, shock, or light, elicit reflex responses. His findings suggest one way in which behaviors could be learned. Over time his concepts, called "respondent conditioning", were expanded "to explain virtually all learning, including such broad areas as the learning of language, the acquisition of knowledge, and the development of deviant behavior" (Kazdin, p.9). Kadzin goes on to suggest that Pavlov's concepts were overextended because they did not give an accurate account of all areas of learning. Kadzin says, "more research has shown that conditioning itself is more complex than

originally thought. For example, certain kinds of connections are more easily learned than others, and pairing stimuli does not automatically lead to learning" (Kadzin, p.9). Beginning with the experimentation of Ivan Pavlov, the attempt to understand and predict human behavior has grown into a very large and complex discipline in the fields of sociology and psychology.

By the mid-twentieth century, psychologists such as B.F. Skinner would be influenced by Pavlov's findings. Skinner explored the impacts that various external consequences might have on behavior. He helped to distinguish between learning resulting from respondent conditioning, found by Pavlov, and learning resulting from consequences received from similar past behavior. Skinner's findings showed, "responses that operate on the environment are strengthened and weakened as a function of the events that follow them" (Kadzin, p. 10). Most of the behaviors performed in everyday life such as reading, walking, working, and talking, fall under this type of learning behavior.

Research continues today to more thoroughly explain what causes behavior and behavior changes in individuals. Two main paradigms are used to explain the concept of behavior. One group of scientists and theorists who emerged from Pavlov's experimentation argue that behavior is a result of intrapersonal, cognitive information processing. Choice, therefore, is the outcome of deliberation and decision-making.

Using this paradigm, attempts to change behavior would focus on the internal characteristics of an individual. Another group, commonly associated with the psychologist, B.F. Skinner, argue that behavior is a result of previous behaviors. Choice, therefore, is influenced by environmental and inherited stimuli. Using this paradigm, attempts to change behavior would focus on external factors influencing the individual (Foxall, p.12). As the results of Pavlov and Skinners' experimentation verify, the study of behavior is complex and sometimes contradicts itself, therefore, any attempts to change behavior can not be 100% accurate 100% of the time.

## 3.2- Behavior Change Theories

Next, three theories along with supporting examples, are described in order to exemplify how behavior change can occur in individuals.

### Attitudinal-Behavioral Relationship

The first behavior theory described here is called the Attitudinal-Behavioral Relationship, or the "AB". It states that a person's behavior is largely determined by factors that exist within the individual. Of all these elements *attitude* (beliefs, emotions, feelings, actions tendencies) is of pre-eminent importance in shaping behavior. The prediction of behavior, therefore, depends upon accurately measuring attitudes. The key to changing behavior is in the modification of attitude, predominantly through the presentation of informative or persuasive messages.

A case study conducted at the University of California, Santa Cruz serves as an example that the use of persuasive messages combined with modeling effectively changes individual behavior. "The male shower room had a sign that encouraged the showers be turned off while users soap up. More specifically the sign read: 'Conserve water: 1. Wet down. 2. Water off. 3. Soap. 4. Rinse.' This sign apparently had little effect on behavior. On average, only 6% of users were found to comply. One possibility was that people didn't see the sign. However, a survey of a random sample of students demonstrated that 93% were aware of the sign and its message. Elliot Aronson and Michael O'Leary (the researchers) reasoned that students might be far more likely to comply with the sign if they observed another student following its instructions. To test this possibility, an accomplice entered the male shower room in the athletic complex and proceeded to the back of the room and turned on the shower. When another student entered, the accomplice turned off the shower, soaped up and then turned on the shower once more to rinse off. All this was done with his back to the other student and without eye contact. When the accomplice modeled water conservation in this way, the percentage of students who turned off the shower to soap up shot up to 49%. Furthermore, when two accomplices modeled water conservation, the number of people who followed suit rose to 67%. … While the sign by itself was ineffective in altering the behavior of those using the shower room, when it was combined with the norm, behavior changed dramatically" (McKenzie-Mohr and Smith, p. 74).

## Cognitive Dissonance

The second behavior theory described here is referred to as "cognitive dissonance" or "contact hypothesis". This model states that a person's attitude will change once their behavior changes. This theory can be used to exemplify the benefits of applying regulations to promote certain desired behavior. A few examples include laws for speeding, desegregation, and pollution.

A case study on racial integration in the US Army serves as an example for cognitive dissonance. This planned integration was based on the notion that individual discrimination and prejudice toward members of a minority group will diminish when they have direct interpersonal contact, and that negative stereotypes of the minority group are disconfirmed by this contact.

The decision to desegregate the military came from President Truman's Executive Order 9381. The committee that formed to uphold the Order abolished the quota system and pressured the Army to integrate its training camps in 1950. "The armed forces were integrated in two phases. During the first phase, in the 1950's, *organizational integration* put an end to any formal discrimination in recruitment, training, retention, and on-base living arrangements. The second phase, *leadership integration*, would not occur for another quarter of a century" (Moskos and Butler, p. 31).

As of 1995, about half of all blacks in military uniform were enlisted in the Army. These 145,000 African-Americans made up 27% of all Army personnel on active duty (Moskos and Butler, p. 6). Monitoring and planning for continued integration was the responsibility of soldiers within the Army. "The workhorse of the Army's racial policies is the equal opportunity advisor (EOA). In every command, at brigade level or higher, a full-time EOA is responsible for monitoring racial incidents, looking at patterns of race in assignments and promotions, and generally attending to interracial awareness through events like commemorations of Black History Month. EOAs, whether full- or part-time, are supposed to be the commander's eyes and ears for the racial climate in the unit. In 1994 the Army had approximately 350 full-time EOAs, a ratio of about one to every 1,500 soldiers. In the past, most EOAs were black; today, about half of all EOAs are white, about a third are black, and the rest represent other minorities." (Moskos and Butler, p. 54-55).

The process of integration has taken over 30 years, but it appears that the races get along remarkably well. "A visitor to an Army dining facility is likely to see a sight rarely encountered elsewhere in American life: blacks and whites commingling and socializing by choice. This stands in stark contrast to the self-imposed racial segregation in most university dining halls today- not to mention within most other locales

in our society.  As a rule of thumb, the more military the environment,

the more complete the integration.  Interracial commitment is stronger

in the field than in garrison, stronger on duty than off, stronger on post

than in the world beyond the base.  Even in the grueling conditions of

deployments to the Persian Gulf, Somalia, or Haiti, not a single

incident occurred that was severe enough to come to the attention of the

military police- not one." (Moskos and Butler, p. 2).  By regulating

behavior over a 30-year period, the US Army has successfully altered

the interactive attitude between whites and blacks.


### Diffusion Theory

The final theory described here is called "diffusion theory".  This theory

broadens behavior research beyond attitude and belief modification to theory on

diffusion of new ideas and innovations.  Research in the fields of sociology,

education, public health, communication, marketing, and geography shows that

dispersal of new ideas and innovations throughout large populations is

predictable.  Everett M. Rogers chronicles the study of diffusion theory in his

book *Diffusion of Innovations.*   Each

study finds that innovations, which

include new products and new

ideas, diffuse in an S-shaped curve

over time, and innovators, or those

changing first, have higher

socioeconomic status than later

adopters  (see Figure-1).

**Figure 1- Diffusion Theory Diagram**
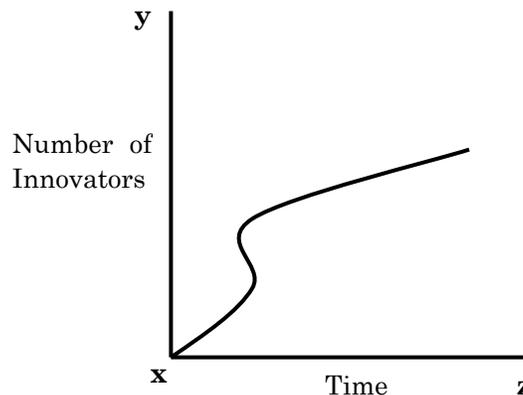


Source: Pickens, P. 2002.

The earliest studied example of diffusion of new ideas was documented by an Iowa State University study in 1943. The researchers, professor Bryce Ryan and masters student Neil Gross, studied hybrid corn diffusion in two small Iowa communities. "The innovation of hybrid corn was one of the most important new agricultural technologies when it was released to Iowa farmers in 1928. The new seed ushered in a whole set of agricultural innovations in the 1930s through the 1950s that amounted to an agricultural revolution in farm productivity. Hybrid corn yielded about 20 percent more per acre than the open-pollinated varieties that it replaced." (Rogers, p.31).

The study was conducted by first collecting then analyzing personal interviews from 259 farmers. The results follow: "All but two of the 259 farmers had adopted hybrid corn between 1928 and 1941, a rather rapid rate of adoption. When platted cumulatively on a year-by-year basis, the adoption rate formed an S-shaped curve over time. After the first five years, by 1933, only 10 percent of the Iowa farmers had adopted. Then, the adoption curve "took off", shooting up to 40 percent adoption in the next three years. Then the rate of adoption leveled off as fewer and fewer farmers remained to adopt the new idea." (Rogers, p.33).

Each of these three theories, attitudinal-behavioral relationship, cognitive dissonance, and social diffusion, attempt to explain how human behavior can be influenced and changed. Each has withstood rigorous testing over time and has emerged as a standard in the psychology field. The community-based social marketing model applies elements of these theories to promote behavior change. In addition, these theories serve as foundations for programs created in the

advertising and marketing fields, whose goal is to influence consumer behavior

and attitude in order to sell products and services.

# Chapter 4
# Community-Based Social Marketing

## 4.1- Social Marketing

The term "social marketing" was coined in 1952 with the rhetorical question, "Why can't you sell brotherhood like you sell soap?" The resulting field of social marketing is the application of commercial marketing strategies to the diffusion of nonprofit products and services. Often planning and health issues are addressed by social marketing campaigns. Examples include energy conservation, safe driving, AIDS prevention, family planning, recycling, and nutrition improvement.

Many widely acknowledged social marketing campaigns develop messages fit for use in the traditional commercial marketing arena, namely, the mass media. The health field best exemplifies these advertising campaigns with ads targeting AIDS prevention and teenage drug use.

## 4.2- Community Based Social Marketing

Though the mass media is one effective social marketing approach, it can't always be applied to alter behavior. Time, knowledge, target audience, and cost may restrict its application. In order to address these constraints the community-based social marketing model was

developed. It employs tools and techniques that enable a program

designer to promote a behavior change without limiting information

mediums to only the traditional commercial marketing arena.

The model is organized in an easily understood fashion (see Figure 2).

First, benefits and barriers to a particular behavior are identified.

Behaviors are determined using qualitative and quantitative

information. For example, quantitative information is found through

literature reviews and samples taken from community surveys, and

qualitative information is gained through observational studies and

focus groups. Throughout this process benefits and barriers to the

identified behavior are recorded.

**Figure 2- Community-Based Social Marketing Model**
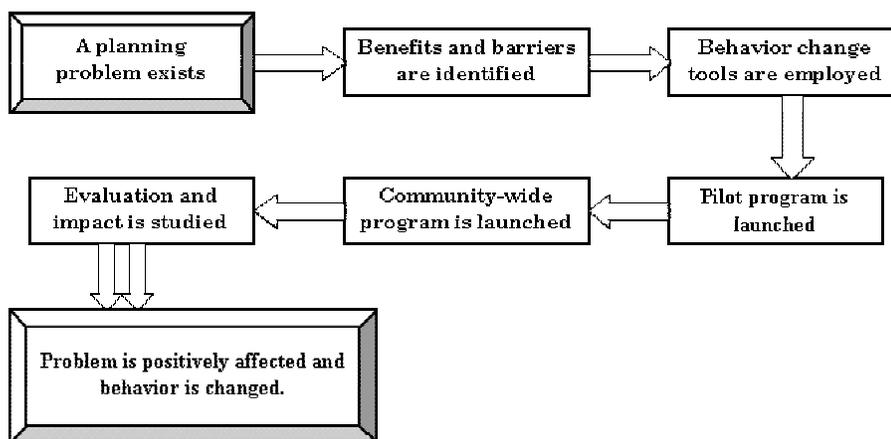


Source: Pickens, P. 2002. Adapted from McKenzie-Mohr and Smith.

The next step in the model is to organize the public into groups that

have common characteristics, as well as perceived benefits and barriers

to the identified behavior, in order to determine a "target audience". At this point a program is created using behavior change principles such as commitment, prompts, norms, communication, and incentives (see description-Table 3). Next, a pilot program is delivered before implementing the program community wide. Finally, an evaluation of the program's impacts on a community wide scale is completed. A graphic display of the model is shown in Figure 2.

Central to the development of a community-based social marketing program are three questions: What behaviors should be promoted? Who should the program address or target? What conditions will an individual face in deciding to adopt a new behavior? (McKenzie-Mohr, Smith, p. 5) These conditions can be divided into a matrix as shown in Table-2.

**Table 2- Identifying Behaviors and Benefits- Description Matrix**

|  | New Behavior | Competing Behavior 1 | Competing Behavior 2 |
|---|---|---|---|
| Perceived Benefits |  |  |  |
| Perceived Barriers |  |  |  |

Source: McKenzie-Mohr, Smith, p. 5.

The social science field has identified numerous tools to change behavior. The community-based social marketing model applies five of these tools. They are: commitment, prompts, norms, communication, and incentives. A brief definition and description of each tool follows:

**Table 3- Principles of a Community-Based Social Marketing Program**

| PRINCIPLE | DESCRIPTION |
|---|---|
| Commitment | The commitment tool is utilized by asking a person to make a commitment to change using a verbal or written agreement. The argument behind using this tool for behavior change is that once a person commits to a certain idea or action a subtle shift occurs in their attitude toward it. This shift in attitude causes that person to act with consistency. |
| Prompts | Prompts are visual or auditory aids that remind a person to carry out an activity that they might otherwise forget. Prompts are useful in community-based social marketing campaigns because they can be used to target specific behavior and don't need to be costly additions to the program. Sometimes, a person simply forgets to act, so by hearing or seeing a prompt they are reminded. |
| Norms | Norms guide how a person behaves because they look around for clues on how to respond. Behavioral norms influence change through techniques such as "modeling" desired behavior. |
| Communication | Communication is used to effectively persuade, educate, and communicate desired behavior changes in a community based social marketing campaign. Without creating or "framing" a message, new ideas and attitudes could not diffuse through a community. |
| Incentives | Incentives are a tool used to motivate a person to continue performing a desired behavior, or to change from an undesirable to a desirable one. Some common incentives include user fees, refunds, variable rates, preferential treatment, and social approval. |

Source: Pickens, P. 2002. Adapted from McKenzie-Mohr and Smith.

In sum, this model seeks to move individuals in a community from engaging in some pre-determined "incorrect" behavior to a different, "correct" behavior. To foster this change the model primarily focuses on voluntary actions as opposed to regulations. The result is measurable behavior change within an identified community. The remaining four chapters of this report provide examples of this model in use and analyze the effectiveness of this model when applied to social problems that planners often address.

# Chapter 5
# The EcoTeam Program and Survey Analysis

This chapter provides an in-depth description and analysis of a program

that incorporates the use of the community-based social marketing to

change resource consumption behavior among citizens of Deschutes

County, Oregon.  The first section provides a description of The

EcoTeam Program, the community-based social marketing tools used,

and the results of the program.  The second section reveals findings

from the "Deschutes County EcoTeam Participant Survey".

## 5.1- "The EcoTeam Program"- A Sustainable Lifestyle Campaign in Deschutes County, Oregon

**Description**
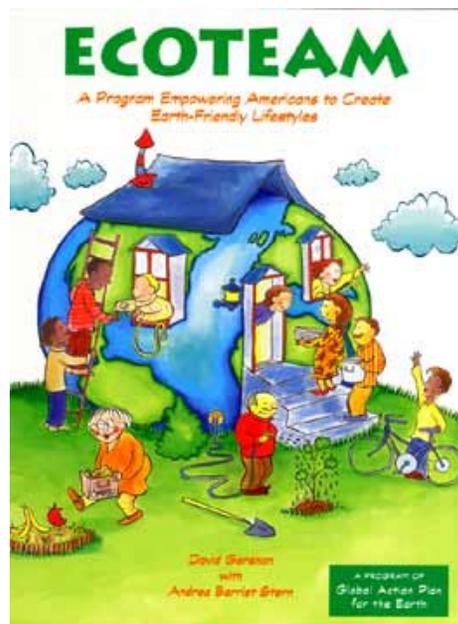
**EcoTeam Workbook Cover from www.globalactionplan.org.**

Founded in 1989, Global Action Plan for the Earth (GAP) is a nonprofit organization whose mission is to "promote and support the development of sustainable lifestyles and livable neighborhoods in communities around the United States through service contracts with

local, state, and federal government agencies" (Global Action Plan).

The U.S. program is part of a larger international effort that is operating in seventeen countries with the combined participation of 150,000 people. The EcoTeam Program is just one of GAP's projects. The EcoTeam Program's primary goal is to reduce resource consumption at the household level by promoting individual behavior change.

Staff, volunteers, and a workbook called "EcoTeam- A Program Empowering Americans to Create Earth-Friendly Lifestyles", are the primary resources used to promote behavior change. The program is initiated when an interested community member contacts The EcoTeam Program office. Staff coordinates a



**Sample Garbage "Action" from EcoTeam Workbook- www.globalactionplan.org**

neighborhood walk with the individual and a volunteer EcoTeam "coach" to invite other neighbors to form an EcoTeam. Teams are optimally between three and seven households in size and are located in the team initiator's neighborhood. The program format consists of eight meetings conducted at two-week intervals usually taking place in team

member's homes. Meetings last between two to three hours; several days between meetings are needed to perform "actions", or behavioral changes, agreed upon during the meeting. The whole process takes approximately four-months.

Using the EcoTeam workbook provided by GAP as the primary guide, individuals take action to develop "sustainable lifestyle practices" in six areas: Garbage, Water, Energy, Transportation, Consumption, and Empowerment. The sixth area, called Empowerment, enables teams to broaden their sustainable actions to reach out to the greater community in which they live. Figure 2 illustrates an action for reducing junk mail in household garbage. Other examples of actions include obtaining and using cloth bags for shopping, switching to fluorescent light bulbs, drying clothes on a clothesline, sharing tools between neighbors, and sharing the EcoTeam lifestyle ideas at work.

There are four EcoTeam offices currently staffed and operating in the U.S. These offices are located in Madison, WI, Columbus, OH, Rockland, County NY, and Deschutes County, OR. Offices are staffed using public and foundation funding. The Deschutes County program operates with two part-time staff and 20 volunteer coaches. Fifty percent of its operating budget comes from a foundation grant, with the remaining fifty percent obtained by local match from Deschutes County Solid Waste, the City of Bend, and the City of Redmond (Santasiero, personal interview). In addition, the program and workbook are

available to anyone outside of these cities through GAP by phone, e-mail, or fax.

## Community-Based Social Marketing Tools Used

Tools used in this case study were:

- Overcoming Barriers
- Building Motivation
- Using Norms
- Obtaining Commitment
- Word-of-Mouth
- Modeling

## Results

Results of the EcoTeam Program show varying levels of success in reducing household consumption of resources. The method used to secure results is to measure participant's consumption rates before and after the program. For example, recording the amount of garbage (measured in lbs/yr) that a participant's household sends to the landfill before and after the program indicates whether actions taken during the program help to reduce overall garbage production. The EcoTeam program measures overall consumption by first asking participants to take a "Lifestyle Assessment" that evaluates and measures current lifestyle practices. Throughout the program measurements are taken that are later compared to results of the original consumption level measured by the Lifestyle Assessment. New measurements are summarized on a form given to each participant at the final meeting, so that they can see individual and team progress. An example of this form taken from a random, four-household team in Bend, Oregon is shown in Table 4. On this particular team, a 60.2% reduction of garbage sent to the landfill is seen.

## Table 4- Sample EcoTeam Accomplishment Form

| ACTION | GARBAGE | | WATER | | ENERGY | TRANSPORTATION | | CONSUMPTION | CO2 | DOLLARS |
|---|---|---|---|---|---|---|---|---|---|---|
| | lbs/year saved | % cut | gal/yr saved | % cut | % cut | gal/yr saved | % cut | # of actions taken | lbs/yr saved | $/yr saved |
| Names* | | | | | | | | | | |
| n/a | 468 | 56.3 | 4,800 | 19.0 | 3.7 | 27 | 5.0 | 3 | 1,048 | 58 |
| n/a | 884 | 68.0 | 8,380 | 14.0 | 17.2 | 117 | 8.3 | 1 | 8,007 | 415 |
| n/a | 52 | 50.0 | 7,405 | 61.9 | 3.7 | n/a | n/a | 5 | 269 | 11 |
| n/a | 728 | 66.7 | 3,328 | 10.5 | 5.9 | 8 | 0.7 | 4 | 1,476 | 76 |
| ACTION | GARBAGE LBS/YR SAVED | | WATER GAL/YR SAVED | | ENERGY % CUT | TRANSPORTATION GAL/YR SAVED | | CONSUMPTION # OF ACTIONS TAKEN | CO2 LBS/YR SAVED | DOLLARS SAVED |
| Total | 2,132 | | 23,913 | | N/A | 151 | | 13 | 10,801 | 560 |

*Names of participants are deleted to protect anonymity.
Source: EcoTeam Accomplishment Form, Bend Oregon, 6/13/2000.

The results shown in Table 5 reflect the range of averages from all cities participating in the program.  These results indicate overall success of the program.

## Table 5- U.S. Results of EcoTeam Program

| ACTION | RESULTS |
|---|---|
| Garbage | 41-51% less garbage sent into the waste stream |
| Water | 25-34% less water used |
| Energy | 9-17% less energy used |
| Transportation | 16-20% less fuel used for transportation |

Source: www.globalactionplan.org

## 5.2- Survey Analysis

Since record keeping began in 1995, approximately 3,500 people have participated in the EcoTeam Program.  Of the 250 surveys mailed, 76 valid responses were received, yielding a response rate of 36.0%.  The remainder of this chapter provides an analysis of the "Deschutes County EcoTeam Participant Survey".

Initial survey questions queried in what time period respondents participated on an EcoTeam, and whether or not they completed it. Question 1 asked, "Approximately what year did you participate on an EcoTeam?" Nearly all responses, 94.7%, came from the category "in the last five years (1998-2001)". The remaining respondents participated "this year (2002)", 1.3%; "between 6 and 8 years ago (1994-1997)", 1.3%; and "during the first year of the program (1993)", 2.6%. Next, respondents were asked if they completed the program. A very high positive response was recorded. The survey yields 94.7% responding that they had completed the program, and 5.3% responding that they had not completed the program. Some responses for not completing the program were "lack of time", "family illness", and "other team members dropped out".

The focus of the EcoTeam program is to reduce consumption habits of individuals at the household level. During the course of the program, specific actions are suggested to team members in order to promote resource reduction. These habits translate to a reduction of resources. Questions 6 thru 15 of the survey addressed these actions by asking the participant if they continued to reduce amounts of garbage, water, energy, transportation, and consumption habits after they completed the program. The actions, Garbage (97.4%), Energy (93.4%), Consumption (88.2%), and Water (86.8%), all had recidivism rates of 85% or greater, while Transportation lagged behind with a 68% recidivism rate. Figure 3 highlights the recidivism rate by category.

**Figure 3- Recidivism Rate by Category**
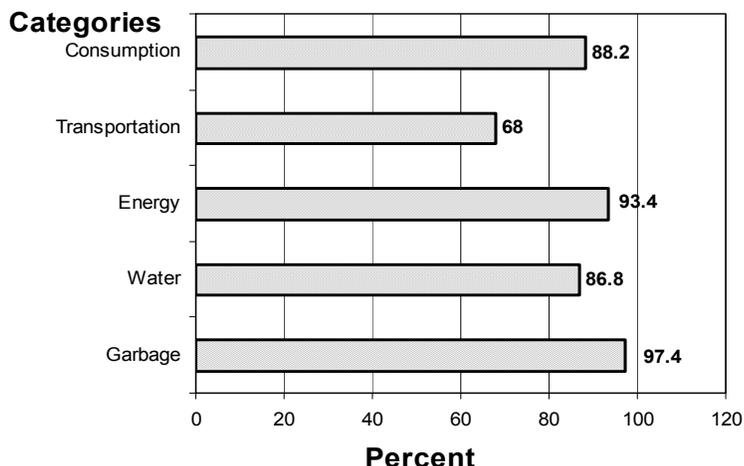


The survey also broke down the categories into specific actions and queried on the recidivism of these specific actions.  A majority of actions in each category continue to be carried out after the participant completed the program.  Actions with 50% or greater recidivism are shown in Table 6.

**Table 6- Actions with 50% or greater recidivism**

| ACTION | PERCENT |
|---|---|
| Garbage | |
| Recycling | 97.4% |
| Composting | 71.1% |
| Eliminating Junk Mail | 64.5% |
| Water | |
| Watering Lawn and/or garden efficiently | 76.3% |
| Using Water efficiently in kitchen sink | 64.5% |
| Using water efficiently in Bathroom sink | 61.8% |
| Reducing shower time | 55.3% |
| Energy | |
| Remembering to turn things off | 90.8% |
| Lowering your thermostat | 75% |

| ACTION | PERCENT |
|---|---|
| Transportation | |
| Combining trips | 57.9% |
| Consumption | |
| Purchasing Ecowise products | 65.8% |
| Buying organic products | 60.5% |
| Purchase of less packaging | 60.5% |
| Finding satisfaction through non-shopping activities | 55.3% |

The primary purpose of the survey was to answer whether EcoTeam participants feel that their behavior has changed and whether they believe that the community-based social marketing tools employed during the program influence their ability to change their own behavior. Questions 3 and 4 address these research questions.

Question 3 asked, "Please indicate whether you strongly agree, agree, feel neutral, disagree, or strongly disagree with the following statements." The statements, the percentage response rate, and the behavior change tool associated with it are shown in Table 7.

**Table 7- Agreement with the Community-Based Social Marketing Model**

| PRINCIPLE | STATEMENT | STRONGLY AGREE/AGREE | NEUTRAL | DISAGREE/STRONGLY DISAGREE |
|---|---|---|---|---|
| Commitment | "Making a verbal commitment to my teammates to complete an 'action' encouraged me to actually follow through with it. " | 89.5% | 10.5% | 0% |
| Modeling | "EcoTeam Coaches and Staff serve as a role model for sustainable lifestyles." | 85.6% | 10.5% | 3.9% |
| Taking Action | "My behavior changed more by participating on an EcoTeam than it would have if I read a book or brochure about similar actions." | 86.8% | 7.9% | 3.9% |
| Behavior Change | "The EcoTeam program helped me move from awareness of an issue to actually taking action to change that habit in my life." | 85.5% | 9.2% | 3.9% |
| Diffusion | "I learned or shared sustainable lifestyle habits with my teammates that were not in the workbook." | 67.1% | 30.3% | 2.6% |
| Evaluation | "I receive positive feedback from community members for participating on an EcoTeam." | 46% | 43.4% | 10.5% |

In addition to sampling respondent's agreement or disagreement with the model, five major actions or categories were sampled for persistence of behavior change. These actions fall under the categories of Garbage, Water, Energy, Transportation, and Consumption. When reviewing all five categories as a whole, 55.3% of respondents show persistence of behavior change in all 5 categories, 28.9% show persistence in 4 categories, 10.5% show persistence in 3 categories, 3.9% show persistence in 2 categories, and 1.3% show persistence in 1 category. Table 8 summarizes these percentages.

**Table 8- Number of Behavioral Changes Sustained**

| NUMBER OF ACTIONS | PERCENT |
|---|---|
| 1 | 1.3 |
| 2 | 3.9 |
| 3 | 10.5 |
| 4 | 28.9 |
| 5 | 55.3 |

Further analysis of the survey indicates a strong correlation with sustained behavior change actions and agreement with the community-based social marketing model. Table 9 shows that the more the respondent agreed with the model, the more sustainable behaviors or actions were performed.

**Table 9- Average Number of Actions Taken**

| NUMBER OF ACTIONS* | MEAN |
|---|---|
| 1 | 14.0 |
| 2 | 22.3 |
| 3 | 22.3 |
| 4 | 24.4 |
| 5 | 24.7 |

*- Actions surveyed were- Garbage, Water, Energy, Transportation, Consumption.

The next table shows correlations between actions and specific principles in the model.

**Table 10- Correlations and Statistical Significance**

| | ACTIONS | | | | |
|---|---|---|---|---|---|
| PRINCIPLES | Garbage | Water | Energy | Transportation | Consumption |
| | strength^ | strength^ | strength^ | strength^ | strength^ |
| Commitment | .057 | .289* | .114 | .083 | .031 |
| Modeling | .137 | .167 | .328* | .112 | .223 |
| Taking Action | .357** | .208 | .297** | .127 | .391*** |
| Behavior Change | .338** | .239** | .322** | .076 | .337** |
| Diffusion | .082 | .147 | .166 | .058 | .209 |
| Evaluation | .013 | .110 | .075 | .039 | .142 |
| CBSM Model | .231* | .283* | .337** | .072 | .350** |

^= strength of relationship

* $p \leq .05$    ** $p \leq .01$    ***$p \leq .001$

Question 3-d specifically addressed whether participants feel that The

EcoTeam Program helped to move them, "from awareness of an issue to

actually taking action to change that habit in my life." Nearly all

respondents, 85.5%, strongly agree or agree with this statement. Of the

remaining, 9.2% felt neutral, and 3.9% disagreed or strongly disagreed

with the statement. These results indicate that the EcoTeam Program

is fulfilling its mission to reduce resource consumption at the household

level by promoting individual behavior change.


Not only do a high percentage of EcoTeam participants feel that their

personal behavior has changed as a result of the program, but a high

percentage believe that they are influencing the behavior of others as

well. Question 4 asked, "Do you believe that your actions have

influenced others?" A high percentage, 82.9%, of respondents answered

"yes" to this question. The two highest categories of those influenced

are family, 69.7%, and friends, 52.6%. Table 11 below provides the

percentages of other categories of people that participants believe they

influence with their actions.

**Table 11-People Influenced by EcoTeam Participants' Actions**

| CATEGORIES | PERCENT |
|---|---|
| Family | 69.7% |
| Friends | 52.6% |
| Co-Workers | 35.5% |
| Non-Participating Neighbors | 18.4% |
| Strangers | 5.3% |
| Other | 7.9% |

# Chapter 6
# Case Studies

This chapter reviews two case studies in which the community-based social marketing model is implemented.  They are included to further demonstrate use of the model in planning related programs.  The first case study, "Go Boulder", addresses traffic congestion and air pollution in the City of Boulder, Colorado.  The second study, "Air Quality Public Education and Incentive Program", addresses human health and air quality issues in the metropolitan area of Portland, Oregon.  For each case study a description of the program, the community-based social marketing tools used, and the results of the program are provided.

## 6.1- "Go Boulder"- Transportation Plan for the City of Boulder, Colorado
### Description

In 1989, the Boulder City Council developed the "Go Boulder" program as part of the City's Transportation Master Plan to reduce traffic congestion and air pollution. The plan indicated that the most effective way of achieving Plan goals was by inducing people to shift from single occupant vehicle use to alternative transportation such as bicycles, public transit, and walking.



**Program Logo from www.ci.boulder.co.us/goboulder/transit**

One goal of the Plan was reaching a 15 percent modal shift away from single-occupant vehicles by the year 2010.

As a result of employing the tools of the community-based social marketing model, the ECOPass program was established to address the modal shift goal. This transit pass program was created to meet the needs of three target audiences: businesses, students, and community associations. The program worked by offering discounted bus passes to individuals who purchased passes as part of a larger group-purchasing program. The discount pass acted as an incentive for these target groups to change their transportation behavior. As an added incentive to participate, companies were offered a 25 percent discount in the first year.

Before launching the program, program coordinators identified perceived barriers. One example of a perceived barrier was unforeseen situations where individual transportation would be needed. This barrier was identified through public meetings. In order to address this, a guaranteed free taxi ride home was designed into the program. Perceived benefits were also addressed through a folder advertising the program. The folders included testimonials from participating companies.

Similar programs were developed to meet the needs of 25,000 students at the University of Colorado. With a student ID card, they rode the bus for free. Reduced rate ID passes were also made available through

homeowner's associations and other neighborhood associations. With

the goal of reducing the number of trips needed to run errands,

households were given a directory of local businesses that delivered

goods and services to the home.

The use of norms and modeling in this program proved to keep people

engaged. As others observed co-workers, fellow students, and neighbors

using the bus more, so did they. While reduced cost was an incentive to

try the bus system, research showed that most people who continued to

use the buses did so because they found it convenient

(www.toolsofchange.com).

## Community-Based Social Marketing Tools Used

Tools used in this case study were:

- Overcoming Barriers
- Norms
- Communication
- Incentives

## Results



**Drawing of EcoPass from
www.ci.boulder.co.us/
goboulder/transit**

A 6 % modal shift from single-occupant

vehicles to other modes of transportation

was achieved between 1990 and 1994. In

addition, pedestrian trips increased by

3.5 %, bicycle trips increased by 2.2 %,

and transit trips increased by 1.7 %.

There was also a total decrease of 2.3 % in multiple-occupancy vehicle,

truck, and motorcycle traffic. In contrast, nearby regions and the U.S.A.

as a whole have shifted towards increasing use of single occupant

vehicles  (www.toolsofchange.com).



Among individual businesses using the ECO Pass, bus ridership

increased by 59 % to 400 %. Ridership was measured prior to

participation and again six months later. At the University of Colorado,

bus ridership went from 300,000 to over one million in the first year

(www.toolsofchange.com).

## 6.2- "Air Quality Public Education and Incentive Program"- Portland Metropolitan Area, Portland, Oregon
### Description

In 1995, Metropolitan Portland was classified as

"Non-attainment" for carbon monoxide and

ground-level ozone (smog) by the U.S.

**Program Logo from www.deq.state.or.us**

Environmental Protection Agency and the

standards required by the Clean Air Act.  Consequently, a strategic

plan, which incorporated the community-based social marketing model,

was created to reduce air pollution and reach a level of "attainment" by

EPA standards.  Oregon's Department of Environmental Quality (DEQ)

initiated the Air Quality Public Education and Incentive Program as

part of the strategic plan.  This program was the first of its kind to be

federally approved as part of a state implementation program (SIP) for

Oregon.  Over a three-year period, 1995-1998, the pilot program

targeted approximately 1 million people, including employees,

businesses, and residential areas of Metropolitan Portland. Close to 500,000 actually became involved.

The program consisted of several non-regulatory sub-programs operating concurrently. One sub-program that involved employers, businesses, and DEQ was called Clean Air Action Days. When smog levels threatened to reach unhealthy levels DEQ would issue a Clean Air Action Day. In response, participating employers would promote pollution prevention ideas to their employees and customers. For example, the Walmart discount department stores aired 60-second announcements on the hour that suggested simple "car smart" ideas such as, keeping cars tuned and tires properly inflated. Communication tools such as in-store announcements and signage were also used at Chevron gas stations, Les Schwab Tire Dealerships, Fred Meyer, Miller Paint, Sherman Williams Paint, Blockbuster Video, Rodda Paint, and other local retailers. The three primary messages conveyed were:

- Reduce driving or use alternatives
- Reduce aerosol spray use
- Don't use gas powered motors

The incentive tool was also used in this program. Partnering businesses were given three different types incentives. First, they were given a complimentary full-page ad by the Portland Business Journal recognizing their business at the end of each ozone season. Second,

they received a certificate from the Governor of Oregon thanking them for participating. Third, a certain amount of sales were guaranteed because the program only offered incentives for partnering business.

By the end of 1997 approximately 400 employers had participated in the program. This number increased to 500 by the end of 1999. The partnerships were successful because all partners benefited from being involved.

### Community-Based Social Marketing Tools Used

Tools used in this case study were:

- Incentives
- Communication
- Prompts
- Commitment

### Results

Research conducted through a telephone survey to random households gave baseline and follow-up evaluation data. It asked questions regarding consumer spending habits, use of automobiles and lawnmowers, and awareness of air quality issues in the Portland metro area. The follow-up survey asked similar questions. In addition, it asked about resident's awareness of the Air Quality Environmental Public Education and Incentive Program.

The program had successful results. At the end of 1998, Oregon was categorized as "in attainment" for both carbon monoxide and ozone. Actual usage of air polluting products such as gas-powered motors and

aerosol sprays did not decline significantly, but more people were aware of the dangers of using such products.  Awareness of Clean Action Air Action Days increased from one-third to almost one-half of Portland residents.  Approximately 500 employers participated in Clean Air Action Days influencing over 100,000 employees.

# Analysis and Recommendations

This chapter provides an analysis of the community-based social marketing model. The following four questions are answered. First, how well does the model apply behavioral science knowledge? Second, how well does the model apply substantiated theories described in Chapter 3 of this report? Third, how effective is the model when applied to programs that deal with planning related issues? Fourth, based on information gathered for this report, is the model an effective planning tool? Finally, recommendations are made for those interested in employing the model as well as those interested in further research on this topic.

## 7.1- Behavioral Science

The concept of behavior is described by two major paradigms characterized by the early experimentation of Ivan Pavlov and B.F. Skinner. Each scientist theorized that behavior was predisposed by different factors. Pavlov suggested that behavior is the result of intrapersonal, cognitive information processing, and B.F. Skinner suggested that behavior is the result of previous behaviors, or environmental and inherited stimuli.

Whether behavior is caused by internal or external factors the community-based social marketing model demonstrates a flexibility to address either factor. This flexibility is expressed in the initial stage of the model, which seeks to identify a desired new behavior, as well as competing behaviors that work against it. Perceived barriers and perceived benefits are also established.

**Figure 4-The Community-Based Social Marketing Model**
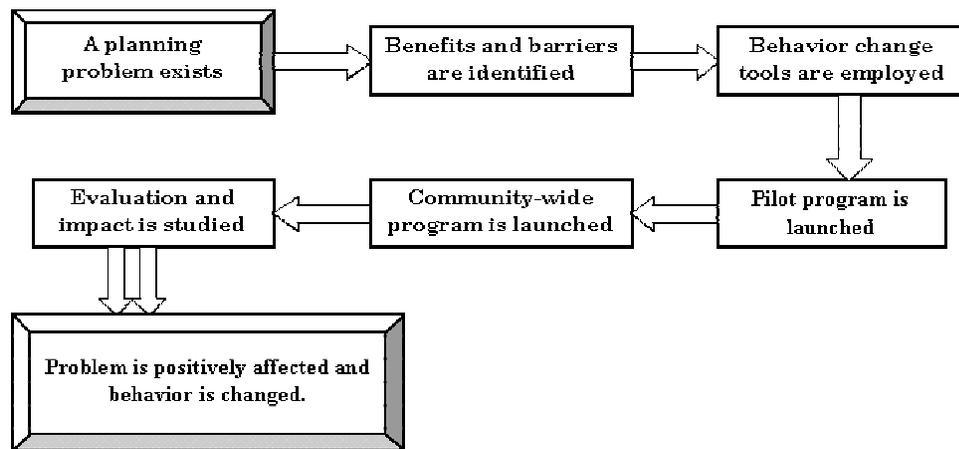


For example, during the set-up stages of the "Go Boulder" program a new behavior, increasing bus ridership, was identified. In addition, a perceived barrier to riding the bus was identified. This barrier was that individuals feared that they might need private transportation in an unforeseen emergency situation. The barrier was addressed by planning the "guaranteed free ride home" taxi option for employees that used the EcoPass. Barriers and benefits can be either internally or externally caused, but the community-based social marketing model provides a program manager tools to address either factor.

## 7.2- Substantiated Psychology Theory

Three substantiated theories were reviewed in Chapter 3. The attitudinal-behavioral relationship theory incorporates the use of modeling and vivid communication to change behavior. The community-based social marketing model also incorporates these tools. For example, the EcoTeam Program workbook uses vivid statistics and cartoons to display persuasive information about resource use. In addition, EcoTeam coaches as well as participating team members provide examples of behaviors to model.

The cognitive dissonance theory states that a person's attitude will change once their behavior changes. Although no data is provided to prove this in any of the case studies examined, this theory might be exemplified by the use of incentives in the "Go Boulder" and "Air Quality Public Education and Outreach" programs. Incentives such as a discounted bus pass and free business advertising encouraged behavior change. Once behavior changed it's possible that attitudes changed as well.

The community-based social marketing model does not specifically incorporate diffusion theory in to its structure, but this theory could be incorporated into the evaluation section of the model. For example, a follow up survey or focus group could query demographic characteristics of community members that adopted the desired behavior change. If results showed that diffusion theory was true, or that early adopters of

the new behavior were in fact in the higher social economic classes and had attained high levels of education, this knowledge might aid in creating a target audience for subsequent programs.

## 7.3- Program Effectiveness

One of the planning-related issues studied in this report was reduction of resource consumption as part of The EcoTeam Program. The primary purpose of the survey was to answer whether EcoTeam participants feel that their behavior has changed, and, whether or not participants believe that the community-based social marketing tools employed during the program influence their ability to change their own behavior. Taking into account that self-reported data is not an absolute proof that actions are taking place, results from the survey indicate strong and sustained effectiveness of the community-based social marketing model. The following table shows the strength of relationship and whether or not there is statistical significance between the community-based social marketing model and the actions completed by EcoTeam Program participants responding to the survey. Results show a strength range from a low of .072 for Transportation to a high of .337 for Energy. It also shows that all actions except for Transportation are statistically significant for the comparison.

**Table 12- Strength of Community-Based Social Marketing Model in The EcoTeam Program**

| | ACTIONS | | | | |
|---|---|---|---|---|---|
| PRINCIPLES | Garbage | Water | Energy | Transportation | Consumption |
| | strength^ | strength^ | strength^ | strength^ | strength^ |
| CBSM Model | .231* | .283* | .337** | .072 | .350** |

^= strength of relationship
* p≤ .05    ** p≤ .01    ***p≤ .001

Further analysis shows the effectiveness of the model as applied to this particular program. The majority of respondents, 55.3%, reported sustained behavior change in all 5 categories. Analysis shows that the more respondents' agreed with the model, the greater the number of behaviors were sustained (see Table 8). Finally, the survey queried how strongly respondent's agreed whether the EcoTeam Program helped to move them "from awareness of an issue to actually taking action to change that habit in my life." Nearly all respondents, 85.5%, strongly agree or agree with this statement. Of the remaining, 9.2% felt neutral, and 3.9% disagreed or strongly disagreed with the statement. Clearly the EcoTeam Program does not work to change behavior for 100% of those who choose to participate, but it does work for a large majority.

The EcoTeam Program's use of the community-based social marketing model is effective in changing behavior, but it does not have the same level of effectiveness for all types of behavior change. Of the five categories, Garbage, Water, Energy, Transportation, and Consumption, sampled, Transportation, resulted in the lowest percentages for sustained behavior change. Of those participants responding to the survey only 68% reported continued transportation behavior change. In addition, this category shows the lowest strength of relationship, .072, and no statistical significance with the community-based social marketing model. These results might indicate that the model does not effectively address transportation issues, but results from the "Go Boulder" program indicate differently. The "Go Boulder" program

showed a 6 % modal shift, from single-occupant vehicles to other modes of transportation, between 1990 and 1994.  Although the goals of each program differ, results of the "Go Boulder" program indicate that the community-based social marketing model can be effective at altering transportation related behavior.

The case studies and survey instrument used for this report validate the effectiveness of the community-based social marketing model, but these programs do not exist in a vacuum.  Other factors could be influencing behavior during the same time period.  For example, new laws, other programs dealing with similar topics, in-migration or out-migration of populations, and shifts of the larger social consciousness are all scenarios that could influence behavioral change at the same time-period in which a community-based social marketing program takes place.

## 7.4- An Effective Tool for Planning

The social issues that planners work with are often complex and political in nature.  One model or process cannot possibly be applied to all scenarios with the expectation of successful results.  Therefore, the question that remains is whether or not the community-based social marketing model an effective tool for elements of the planning process. The remainder of this chapter provides supportive and unsupportive evidence for the model, but overall it is found to be an effective tool for the planning process.

Supportive evidence includes the familiarity planners have with this type of model as well as the positive results it has shown when applied to previous planning related issues. The model is familiar to planners because it follows aspects of the rational model with which planners are experienced.  Specifically, the model requires identifying the desired new behavior in the initial stage of the process.  In addition, there is an evaluative process where information is gathered and decisions are made about the target audience.  During the final stage of the community-based social marketing model, evaluation and feedback take place.  This model strongly correlates with the rational model taught by accredited planning programs  (see Figure 5).

**Figure 5- The Rational Model**
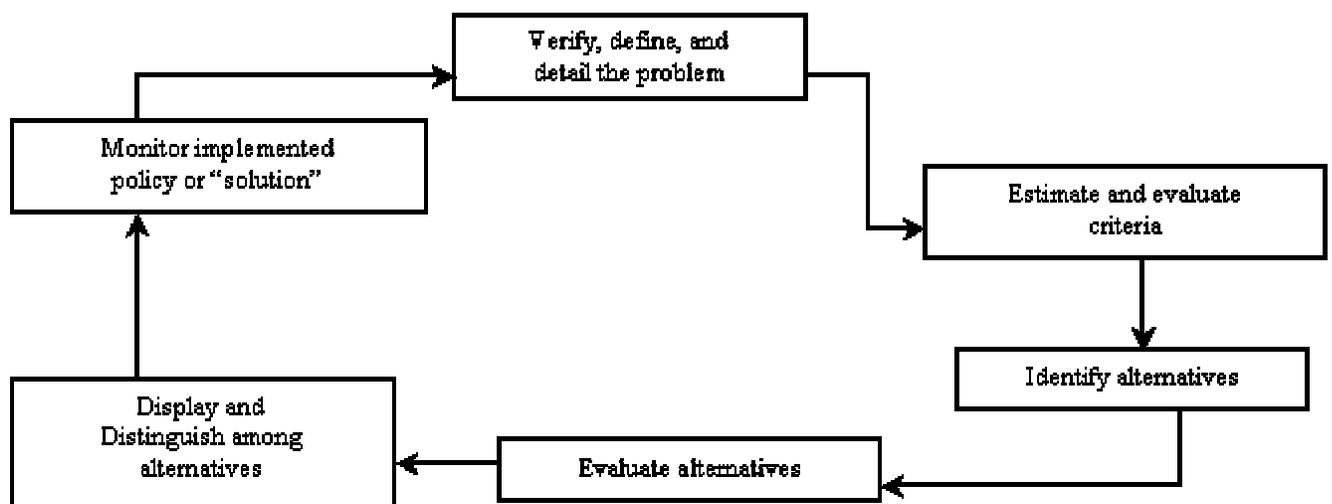


Planners are trained to use the rational model for policy and program decision-making, therefore, the community-based social marketing model is easy for a planner to understand.

Another piece of supportive evidence for the effectiveness of the community-based social marketing model is that planners are familiar with and trained in the tools used to gather information to determine the target audience. The community-based social marketing model requires identifying a target audience for behavior change programs. The tools used are both qualitative and quantitative. They include focus groups, surveys and interviews. Planners are familiar with this type of information-gathering.

In addition to familiarity with the process used for the community-based social marketing model, planners can point to numerous examples where this model has been an effective behavior change tool. Decision-makers or funders, who often decide whether or not a program will take place, can review these supportive case studies. The case studies used for this report provide examples of successful programs that used the community-based social marketing model. For example, the Air Quality Public Education and Incentive Program was the first of its kind to be federally-approved as part of a state implementation plan for Oregon. Also, the Go Boulder Program has expanded its programs to other alternative transportation options and continues to serve the city of Boulder today. Finally, the EcoTeam Program is a success nationwide, and during the Fall of 2002 will cease to operate as a non-profit organization and instead turn into a for-profit business that sells the program and its services to local jurisdictions.

Both familiarity with the model's process and successful case studies make the community-based social marketing model an effective tool for planners, but it is not without some unsupportive characteristics. For example, this model cannot guarantee success. Often funders and decision-makers need some type of guarantee that resources allocated will result in a successful outcome. Although this model has proven effective in other programs, it may not always be accepted as a viable alternative to standard planning practices such as regulation and simple incentives. In fact, in some cases, regulation may be a faster and more effective use of time and resources. For example, many States have enacted solid waste recycling requirements for local jurisdictions that are effectively coping with over burdened landfills.

In conclusion, planners that manage programs where behavior change is identified as a necessary component to resolve social issues will find the community-based social marketing model effective as well as an easy tool to implement and understand.

## 7.5 Recommendations

For those interested in applying the model:

- Plan ahead- Use the website and other sources to locate case studies that used community-based social marketing model for the same or similar issue as you are interested in. For example, the website www.toolsofchange.com lists 33 transportation related case studies.
- Confirm buy-in at an early stage in the process- Confirm the allocation of money, time and resources for this type of program

from the start. Buy-in on the model must occur before budgets and a timeline are set.

- Consider alternatives- This type of behavior change takes time, if results need to be shown immediately then this may not be the best approach.

- Hire professionals- When creating prompts and incentives look toward the professional fields of marketing and advertising for advice and support. Coke isn't number one for no reason.

- Incorporate the academic community- Faculty, staff, and students in University and college settings often have practical and theoretical experience with models such as community-based social marketing. Do not fail to contact such institutions to seek partnerships and advice when coordinating a program.

- Stay abreast of new research in behavior change science. Like any science, psychologists and sociologists continue to make new findings every day.

- Be aware of other methods of behavior change- Regulation and education are viable options.

For further research:
- Evaluate other behavior change models, and compare them to the community-based social marketing model.

- Choose a specific planning issue with lots of existing data, such as recycling, and compare the results taking a regulatory approach to a non-regulatory approach to change behavior. Evaluate time, cost, attitudes, and actual behavior change for each approach.

- Evaluate a broader range of community members in Deschutes County for sustained behavior change. Include non-EcoTeam Participants in the study.

- Interview and evaluate the community-based social marketing model based on program manager experience. What was learned? What could be changed?

- Find out what jurisdictions and agencies are using non-regulatory approaches to planning issues. Are they aware of community-based social marketing? Why or why not. What approaches are they using? Evaluate.

# Chapter 8
# Conclusion

This report used case studies, a literature review, and original research to explore a behavior change model created by environmental psychologist Doug-McKenzie Mohr.  The purpose of this report was to analyze the effectiveness of the model community-based social marketing when applied to program development in the planning field. Specifically addressed were the issues of household resource planning, transportation planning, and air quality management planning.

Results provided evidence that prove this model is an effective tool for planning professionals.  Results include:  a strong correlation between agreement with the principles of the community-bases social marketing model and sustained behavior change in participant's of The EcoTeam Program in Deschutes County, Oregon; a 6% modal shift away from single-occupant vehicles in Boulder, Colorado after the Go Boulder Program was established; and finally, greater awareness of Clean Air Action Days and "in-attainment" status for smog related air pollutants in Oregon after the Air Quality Education and Incentive Program was established.

The community-based social marketing model had proved to be a useful tool for planning professionals; therefore, it serves as an example of a

successful interdisciplinary approach to improving human welfare.  In

addition, these positive results may be an indicator that outreach by

planners in to social and psychology disciplines is necessary.  Planners

should recognize and utilize expertise in these fields when designing

and implementing planning programs that include complex human

behavior change.

# Raw Survey Data and Transcripts

**Raw Survey Data**

Dear EcoTeam Household,                                                      April 24, 2002

***This is not a solicitation letter.***  We simply need your thoughts and ideas to help the EcoTeam Program provide better service to community members in Deschutes County.  The attached survey will assist the EcoTeam Program in a larger evaluation of the program being conducted by a former Bend resident and EcoTeam coach who is now a graduate student in Community and Regional Planning at the University of Oregon.  Would you please take 10 minutes of your time to complete this survey?

Your contribution will help to:
- o   Determine if the EcoTeam Program has had lasting effects on your lifestyle;

- o   Give you an opportunity to re-shape the future of the program; and

- o   Provide statistics about the overall program.


**ALL RESPONSES WILL REMAIN STRICTLY ANONYMOUS.**


After you complete the survey please seal it in the enclosed postage-paid envelope and put it in the mail by the **deadline** of **Friday, May 10**.  Please refer to the information written below for contact information and details about your rights as a survey participant.

Your time and input are valuable to us.  Thank you for your participation in this project.

Sincerely,



Elaine Sigvaldsen                    Ellen Santasiero                    Pam Pickens
*Campaign Manager*                *Program Manager*                *Master's Candidate*

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I, Pam Pickens, would appreciate your assistance with this research project on behavior change.  The results of this survey will be used in my exit project to complete my masters degree. This research will help me understand the influence behavior change programs, such as EcoTeams, have in their communities.

If you do not wish to participate, simply discard this survey. Responses will be completely anonymous; your name will not appear anywhere on the survey. Completing and returning the questionnaire constitutes your consent to participate.

Keep a copy of this letter for your records. If you have any questions regarding this research, contact Pam Pickens, or her advisor, Andre LeDuc, at the University of Oregon's Community Service Center at 541-346-3889.  If you have any questions regarding your rights as a research subject, please contact the Office of Human Subjects Compliance at the University of Oregon at (541) 346-2510. Thank you again for your help.

# Question 16- Transcripts

Question 16 read, "Is there anything else you would like to tell us about your experience as an EcoTeam participant? *Use the space provided below.*" Responses follow:


My lifestyle has been saving and reusing all that can be- growing up during WWII taught us that our of necessity- the same with not wasting elec. Or water- so the Eco experience was easy for us.


I was well aware of many of the ideas presented by EcoTeam and practiced many efficient habits.  Therefore, I do not think I am a good reflection of what EcoTeam can teach those who are unaware and how much impact a good program like this can have.


Learned alot.  Enjoyed meeting the neighbors and are still trying to improve.  We really try to keep an awareness about everything we do.  Thanks, EcoTeam


Keep Going!


The people who are already recycle-concious are the people involved in a EcoTeam.  Need to reach people "just starting" with their recycle program.  Once on an EcoTeam, living more earth friendly become a habit.


The ecoteam experience solidified our resolve to consome less.  We were somewhat "green" before but this gave us a lot more ideas and impetus.  The highlight of our hightened awareness was the recent purchase of a Honda Insight auto.  It was a great (ecoteam) experience for us and our neighbors.


We really enjoyed getting to know more neighbors, feeling part of a community, and sharing and learning ideas for hands-on, daily, and effective conservation methods.  What a wonderful program.  Keep up the good work!


I was already doing a lot before participating.  Unfortunately what I learned was not of great interest to family members.  They made some changes but continue to waste more than they might.  It made me more aware of haw many car trips I made.  I feel guilty if I take the car out

more than once a day.  I try to have at least two days a week where my car stays at home.  I have reduced consumption and long for public transportation.  (I used to live in Portland).

I thought it was a very worthwhile project.

Encourage all to reduce gasoline consumption, particularly via autos and trucks- go for more efficient vehicles.

It takes a definite commitment by the EcoTeam members to keep the group going strong.  Our group had a lower attendance rate than I'd expected.  I enjoyed participation in the program.

The program was very worthwhile.  Definitely changed our habits.

I think the ecoteam program is highly valuable.  Best when you get an inexperienced "ecoperson" to participate.  Sometimes I think it appeals to those who already are eco conscious.  Like "preaching to the choir."  But, it's a great program to get, keep and improve our earth friendly habits.

Great opportunity to meet and get to know neighbors.

No

Dramatic changes in life style were not expected, energy consumption is largely influenced by the type of activities I do and very little of the energy consumption is affected by reducing electric lighting.  Heating costs are much more significant and it might be useful for the ecoteam to help folks set up cost effective solar energy systems.  Keep up the positive efforts.  Thanks,  name signed  4-29-02

I really enjoyed the experience and meeting new neighbors.  Specific to our team- I think we could have used a little more guidance to encourage the group to make it more fun!

In general, we think about how our actions will effect the environment.

We thought participating on the Ecoteam was a valuable and enlightening process.  WE had a difficult time with commitment from

some of the members on our team due to various life circumstances, which caused our team to loose some enthusiasm. However we feel we have greatly increased our awareness as a family and attempt to be "conscious" on a daily basis. Thank you for the great support!

Made new friends (New to the area) Met neighbors More awareness of xxhale Eco Structure- enjoyed!!

I probably need a refresher course!

It was great- Good to meet neighbors.

Almost all actions taken were done prior to the EcoTeam participation. I continue to conserve as new information and energy saving products become available.

The EcoTeam newsletters are much appreciated for updating and new ideas.

I loved it and I was sorry we didn't restart in Sept. Still see some of the neighbors that were involved.

After many insinuations to my work site (Redmond High School) they finally realized becoming a green school and the financial saving behind it!

EcoTeam is conscious-raising, enlightening, and engaging experience. It definitely got me to pay attention to thoughtless waste and incorporate new habits into our daily lifestyle. EcoTeam is amazingly effective and relatively painless. A great program, for sure.

Along with becoming more aware of my impact on the environment the other great benefit is feeling a deeper sense of community because of connecting with neighbors.

As a result of EcoTeam related lifestyle changes we have saved $2-3,000/year.

The program was very informative made aware of where we could improve our habits would and have recommended program to others

Great for the neighborhood- We're all better friends now

I was inspired by my experience to become a coach.  It was and is fun to be involved in the program and has also encouraged and enabled me to look deeper and wider at how to opt out of the U.S. wasteful lifestyle.  I still haven't been able to grow many of my own vegetables- although I would like to.

In a world where we don't even know our neighbors, being in an EcotTeam group change that.  Since our "team" experience, we are truly connected with our neighborhood in a different way.  Even those who participated in the group after ours are connected.  Caring about taking care of our earth is a nice common bond.  Thank you.

Since completion I have gone from weekly garbage pick-up to on call every 6-8 weeks.  I recycle everything.  My biggest garbage item is dog poop.

The experience of learning from other and the "spotlight" the activities focused on consumption behavior were positive.  Our family had already taken actions prior to the program namely insulating and purchasing an energy efficient furnace, as well as, purchasing a cordless electric lawn mover (this later action was not highlighted during the ecoteam process.  Thank you!

Since my experience w/ the neighborhood EcoTeam- we have replaced our roof, windows, all doors, added insulation, low flow toilets, shower heads, new gas furnace (more efficient model) and new hot water heater.  WE still have to add ceiling insulation, but that's it.  We've noticed a huge difference in our energy bills.  Wahoo!

It was great to meet other people as a participant and coach-relationships that have lasted and remained important in my life.  I think this program is top notch.  Will continue to do all I can to support is!! Bravo Folks!  Heart symbol, signature.

Wonderful program!  Aren't as diligent as we were while participation- a reunion to follow up meeting might be good.

Most of my team members and myself were already doing most of the stuff in the book.  I think I only picked up two tips that I use.  The

program was preaching to the choir in this case. Overall, I was disappointed at how simple the program was. I'm sure that for some people it's a huge eye-opener, but not for me.

Would have liked leader at meetings.

We liked it!

# Appendix B
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