

Cooperative Extension Service

**CTAHR**College of Tropical Agriculture & Human Resources
University of Hawaii at Manoa*Economic Fact Sheet*

Feb. 1998

EFS-25

Benefit Values of Small Neighborhood Projects: Manoa Stream Improvement

Residents like public projects that provide a nicer looking neighborhood and a better place for families to spend their leisure time. However, obtaining broad-based support for government funding of such projects is often difficult, because residents of the nearby community (or some other special-interest group) receive most of the benefits, while the rest of the people in the state or county may benefit very little from the project. Therefore, such projects might not be undertaken even though the benefits from them are greater than the costs.

One of the recommendations included in the Ala Wai Canal Improvement Project Report is a Manoa Stream Improvement Project (MSIP). The MSIP includes erosion control, landscaping, and building a public pathway along the stream. The project would not only help improve water quality in the Ala Wai Canal, but many people would benefit from the beautification of and improved access to Manoa Stream. MSIP would increase opportunities for recreation in the area, and the pathway would serve as a pedestrian route. In particular, students living in the area would find it a pleasant and convenient way to get to and from the University of Hawaii at Manoa (UHM) campus. The value of these benefits is unknown, because they do not have market prices associated with them.

Students in the Fall 1997 class in Project Evaluation and Resource Management (AREC 458) at UHM looked at the value of these benefits. They focused on the benefits from improving the landscape and building a pathway along Manoa Stream from Date Street to Dole Street. Area residents and the people in the UHM community were asked about the value of the benefits they would get.

The survey and respondent characteristics

The survey included questions about the characteristics of the respondents, their interest in the project, and their ideas about its likely uses and value. The survey was carried out at several points near the project location to get respondents who are representative of the nearby residents. Of the 93 respondents in the sample, only 75 could be used in the analysis.

The sample included 57 percent males and 43 percent females, and the majority of the respondents (60%) were associated with UHM. This is not surprising because one end of the project is at the UHM campus. The annual income classes of the respondents were <\$25,000 (66%), \$25,000–\$49,000 (26%), and >\$49,000 (8%).

Interest, uses, and value

Most (73%) of the respondents favored and only a few (3%) opposed the Manoa Stream Improvement Project. The 75 respondents indicated that they would use the project area a total of 147 different ways. The relative importance of how people would use the project is shown in Figure 1. The most popular use of the project area would be for walking, accounting for almost half (48%) of the total uses mentioned. Bicycling (18%), visual pleasure (16%), and other recreation (15%) were also important uses.

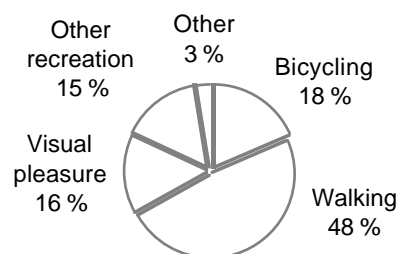


Figure 1. Types of uses of an improved Manoa Stream stated by survey respondents.

The most common procedure for valuing a benefit that is not bought and sold in an organized market is to ask people how much they are willing to pay for it. Respondents indicated that they are willing to donate an average of \$4.80 per month to have the MSIP. If this is each individual's value, the total value of the project is \$4,520,796 per year to the 78,486 people spending time in the project area. However, if the amounts given by respondents actually represented the value to their entire household, the total value of the project is about \$1,501,910 per year.

The value of the project, therefore, is between \$1.5M and \$4.5M per year. If contributions are made forever and the cost of waiting for money is known, the total value of the project can be calculated from the yearly value of the project. Using a waiting cost of 3 percent, the total value of the project is between \$50 and \$150 million. People in the nearby neighborhood would get 77 percent of the benefit, while the rest of people on the island would get 23 percent.

Two characteristics of respondents had large impacts on project values: gender and income. Females indicated they were willing to donate more than twice as much as males (Figure 2a). The amount of money respondents

said they were willing to donate increased as their income levels increased (Figure 2b). Respondents with medium incomes (\$25,000–\$49,000 per year) were willing to donate more than twice as much as those with incomes less than \$25,000 per year. The high-income respondents (>\$49,000 per year) were willing to contribute more than twice as much as the medium-income respondents and almost six times as much as low-income respondents.

Policy considerations

We estimated the value of the Manoa Stream Improvement Project to be between \$50M and \$150M. The study suggested that females value this type of project more than males and that people with higher incomes are more willing to support such projects than people with lower incomes. However, we cannot say that this project should be undertaken, because public funds are limited and other projects may be worth more than the Manoa Stream Improvement Project.

Projects designed both to increase the beauty of an area and provide more recreational opportunities will benefit nearby residents most. While neighborhood residents might be willing to pay for projects like this, the current political structure in Hawaii does not have a procedure to do this at the neighborhood level. The Ala Wai Canal Improvement Project Report recommends that volunteer labor be used for the improvement project to reduce the financial burden of the project. It is presumed that the volunteer labor will be provided by those who value the project most. Thus, more of the project costs will be paid by those who benefit most. This recommendation can be generalized to other small neighborhood projects. Neighborhood Boards may want to consider establishing organized volunteer labor forces for this purpose.

Prepared by Gary R. Vieth and Linda J. Cox, Department of Agricultural and Resource Economics, with the assistance of Robert Alexander, Jason Chang, Harold Cones, Jeanmarie Foy, Reid Nouchi, Piya Sereevinyayut, and Dean Watase, students in AREC 458, Fall 1997, University of Hawaii at Manoa

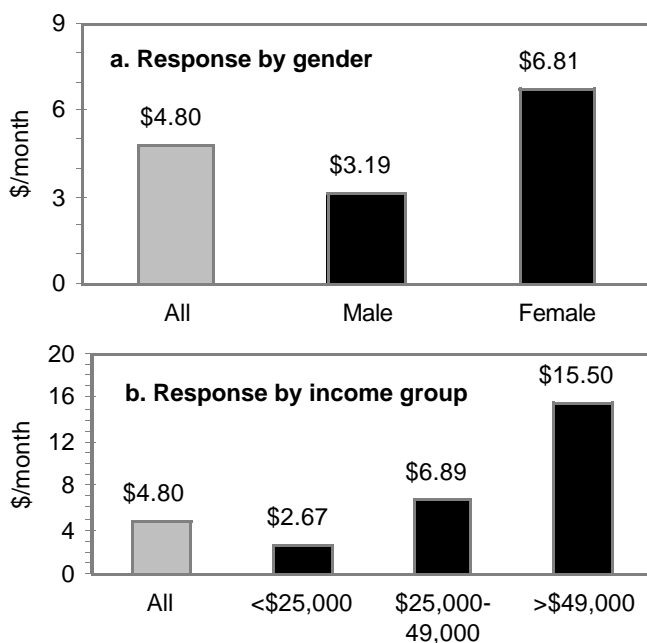


Figure 2. The value of an improved Manoa Stream expressed as the amount that survey respondents would be willing to pay for the improvement.