

IOWA COMMUNITIES BENEFIT FROM AN EXTERNALLY FUNDED TREE-PLANTING PROGRAM

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Abstract. In 1990, investor-owned utilities in Iowa began distributing funding dedicated to tree planting to communities through the nonprofit, volunteer-coordinating organization Trees Forever. To assess the impact of this tree-planting program, a questionnaire was mailed to 268 Trees Forever volunteers in communities throughout Iowa in 1996. The objectives of this study were to measure increases in community forestry activities in towns that received tree-planting funds through the organization Trees Forever and to gather opinions about project administration through funding agencies external to the community. The response rate for the survey was 63%. Four-fifths of the communities responding to questions about community forestry activities showed an increase in some forestry-related activities (e.g., volunteer tree-planting group, tree board, fund-raising activities, tree inventory) after they received external tree-planting funds through Trees Forever; two-fifths of them added as many as four new activities. Also, four-fifths of the survey respondents agreed that their community tree-planting program would not have started without external funding, in this case from utility companies. Our results suggest that the benefits of tree-planting programs are enhanced by assistance provided to communities by a funding agency or a volunteer-coordinating organization.

Key Words. Community tree-planting program; Trees Forever; community forestry.

A model developed by Clark et al. (1997) for sustaining an urban forest identifies a number of key characteristics that promote sustainability. One of the important characteristics is tree species and age diversity within an urban forest. A key to maintaining age distribution and species diversity in a tree population is managed tree planting. Organized groups, such as TreePeople in Los Angeles, California, Minnesota ReLeaf, Branch Out Missouri, and many others throughout the United States, have dedicated themselves to improving their community environments with tree planting (Lipkis and Lipkis 1990; USDA Forest Service 1996).

In 1989, the legislature in Iowa began to require investor-owned utility companies to devote 1.5% to

2% of their gross income to activities that promote energy efficiency. Tree planting for energy efficiency was one of the activities adopted. In 1990 and 1991, several utilities in Iowa developed cooperative agreements with Trees Forever, a statewide, nonprofit, volunteer-based tree-planting organization (Trees Forever 1998) to deliver funding to Iowa communities for tree planting. Communities within the service area of participating utilities were eligible to submit grant applications.

Communities that received funding through Trees Forever were assigned a community coordinator who worked directly with local volunteers to encourage and facilitate planning of tree-planting projects. When communities were granted tree-planting funding through Trees Forever, they were strongly encouraged to develop a communitywide commitment to the tree-planting program, and they were required to match the funding amount dollar for dollar. After receiving funding for two years, communities were required to show a long-term commitment to tree planting and care by developing general tree management goals before they were funded again. Examples of activities communities could choose to develop included a volunteer tree group, an annual report to the city council, sponsorship of educational programs, completion of a tree inventory or assessment, a long-term funding plan, and the development of a long-term maintenance and tree-management program (Trees Forever 1995).

As the utility-sponsored tree-planting grant program developed, Trees Forever personnel worked together with the Iowa Urban and Community Forestry Council, a separate entity that has served in an advisory capacity to the Iowa Department of Natural Resources. Since 1990, the council has been involved in encouraging and assisting communities with their forestry-related activities. The Iowa Urban and Community Forestry Council includes representatives from volunteer groups, nursery and landscape professionals, landscape architects, urban foresters, Iowa Department of Natural

Resource/Forestry Division personnel, Trees Forever, and Iowa State University. Statewide volunteer coordination for the council has been managed by Trees Forever. Since the council was created, faculty and staff from the departments of forestry and horticulture at Iowa State University have worked to provide educational information and training to community volunteers, residents, and employees upon request. As a part of their council involvement, the Iowa Department of Natural Resources Forestry Division provides communities with technical services such as tree population assessments.

Recent surveys in Iowa indicate tree planting in communities increased by more than 300% between 1990 and 1995 (Iowa Department of Natural Resources 1996). The tree-planting programs sponsored by investor-owned utilities were one of the sources that supported this increase. Unfortunately, additional information on other possible impacts of these statewide planting programs has not been gathered.

This research was initiated to determine whether tree-planting programs funded by external sources could promote other activities (creation of a volunteer tree-planting group, a tree board, community fundraising activities for tree planting, a line item in the community budget for tree-related activities, an Arbor Day celebration, etc.) along with tree planting. The objectives of this study were to measure increases in community forestry activities in towns that received tree-planting funds through the organization Trees Forever and to gather opinions about project administration through funding agencies external to the community.

MATERIALS AND METHODS

In October 1996, a survey questionnaire developed by Iowa State University Department of Forestry personnel was mailed to community volunteers who had been identified by Trees Forever. These volunteers were representatives of communities that at some time between 1989 and 1996 had received a tree-planting grant through Trees Forever. All local contacts were community members and not employees of Trees Forever. All 268 communities included in Trees Forever's Iowa volunteer tree organizations 1995–1996 directory were sent a survey.

The questionnaire methods were modeled after the 1994 urban and community forestry survey pro-

duced by the University of Connecticut Cooperative Extension System (Ricard 1994). Questionnaires were accompanied by a cover letter on Iowa State University letterhead, signed by Iowa State University and Iowa Department of Natural Resources personnel; a stamped, self-addressed return envelope was provided. The cover letter assured individual respondents that their responses would remain confidential and that the information collected would be used to evaluate current management and future management needs of community trees in Iowa. Reminder postcards were mailed to questionnaire recipients 10 and 20 days after the initial mailing.

The questionnaire contained 24 questions. One question asked respondents to review a list of ten community forestry-related activities and to indicate which activities existed before and which existed after receiving funding through Trees Forever. Activity options included the existence of a volunteer tree-planting group, a tree board, community fundraising activities for tree planting, a line item in the community budget for tree-related activities, and other community tree-related actions. Other questions addressed sources of external tree-planting funds, sources for tree-related information, and the volunteer's opinions on topics related to funding through Trees Forever. The opinions of the volunteers were measured using a Likert scale with 5 levels ranging from strongly agree to strongly disagree (Anderson et al. 1983).

More than 70% of Iowa communities have a population less than 1,000 people, and to allow for potential comparisons between different sizes of communities, those surveyed were organized into four population categories: > 10,000; 2,501 to 10,000; 1,001 to 2,500; and ≤ 1,000.

RESULTS

Completed questionnaires were received from 168 community volunteers (63% [n = 268]). The highest return rate was from the 1,001-to-2,500 population category (70%), and the lowest was from the 2,501-to-10,000 range (54%).

Forestry-Related Activities/Actions Added

Some communities in every population category showed increases in forestry-related activities after receiving funding. Eighty-two percent (n = 100) of all

communities responding to the question added at least one forestry-related activity, 71% added two, 62% added three, 40% added four, and 33% added five. Dwindling percentages added more activities, with 2% adding nine new forestry-related activities after receiving utility-based tree-planting funding. The action added by more than two-thirds (68%) of the responding communities after they received utility-based funding through Trees Forever was the establishment of a volunteer tree-planting group (Table 1). Within each population category, at least

63% of the communities added this activity. Other activities added by at least one-half of the responding communities were a tree board (53%), fund-raising activities to support tree planting (53%), and participation in an inventory or Iowa Department of Natural Resources assessment of the community tree population (50%).

On average, 40% of the communities with populations greater than 10,000 already had the listed activities present before funding was received through Trees Forever. This situation was true for only 20% of the communities with populations between 1,001 and 10,000, and for 13% with populations \leq 1,000.

Volunteer Opinions Related to Funding Source and Trees Forever

Eighty-three percent of respondents agreed that applying for tree-planting funds from utility companies through Trees Forever was an easy process (Table 2). Eighty-two percent of respondents agreed that without tree-planting funds from the utility companies, their community tree-planting program would not have started. Within the population categories, this percentage increased as the populations decreased. Forty-five percent of respondents agreed that if tree-planting funds from external sources were no longer available, their community tree-planting program would stop. Within the population categories, this percentage also increased as the populations decreased.

Table 1. Percentage of communities having community forestry activities before and after receiving utility-based funding through the Trees Forever organization.

Community forestry activities or actions added	Number	Response (%)		
		Before funding	After funding	Communities adding activities
Volunteer tree-planting group	97	24	92	68
Tree board	97	12	65	53
Fund-raising activities for tree planting	97	13	66	53
Inventory or Iowa DNR assessment of community tree population	98	7	57	50
Community tree-management plan	98	12	41	29
Annual Arbor Day Tree planting	100	24	52	28
Community designation of "Tree City U.S.A."	98	8	36	28
Line item in community budget for tree-related activities	97	36	60	24
Shade tree or street tree ordinance	96	48	68	20
Community forester	99	7	8	1

Funding Through Trees Forever and External Sources

Between 1994 and 1996, communities surveyed reported receiving US\$901,055 from utility grants through Trees Forever; this amount was used to purchase an average of 11,541 trees annually. Also, 56% of all respondents indicated they received tree-planting funds from sources other than Trees Forever between 1994 and 1996. Communities reporting additional funding received US\$481,829; this amount was used to purchase an average of 2,997 trees annually. Other sources of funding included community fund-raisers, private and memorial donations, Small Business Administration tree-planting grants, Iowa Department of Transportation tree-planting grants, and the Iowa Department of Natural Resources Forestry Division community challenge grants.

Sources of Tree-Related Information and Tree-Care Training

When volunteers were searching for tree-related information, the two sources they consulted most often were Trees Forever community coordinators (80%) and local nurseries (75%). Other sources indicated more than 40% of the time included Iowa State University Cooperative Extension (53%) and the Iowa Department of Natural Resources Forestry Division (45%). Tree-care training for volunteers was

Table 2. Percentage of responses by local Trees Forever tree group volunteers to five statements related to funding source and the Trees Forever organization, based on a five-level Likert scale.

Statement	Response (%)				
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. Applying for tree-planting funds from utility companies through the Trees Forever organization is an easy process. Total (n = 166)	21.7 (n = 36)	60.8 (n = 101)	10.2 (n = 17)	6.6 (n = 11)	0.7 (n = 1)
2. Our Trees Forever community coordinator(s) was helpful in getting our group organized and focused. Total (n = 165)	46.0 (n = 76)	41.1 (n = 68)	10.9 (n = 18)	2.0 (n = 3)	0 (n = 0)
3. Without the tree-planting funds from utility companies, our community tree-planting program would not have started. Total (n = 167)	52.7 (n = 88)	29.3 (n = 49)	6.0 (n = 10)	7.8 (n = 13)	4.2 (n = 7)
4. The tree-planting funds from utility companies have helped our community develop and sustain a tree-management program. Total (n = 166)	53.6 (n = 89)	38.0 (n = 63)	5.4 (n = 9)	2.4 (n = 4)	0.6 (n = 1)
5. If tree-planting funding from outside sources stopped, our community tree-planting program would stop. Total (n = 167)	20.4 (n = 34)	25.1 (n = 42)	21.6 (n = 36)	27.5 (n = 46)	5.4 (n = 9)

most often provided by Trees Forever Community Coordinators (70%), local nurseries (33%), and Iowa State University Tree Care Workshops (26%).

DISCUSSION

Results suggest that increases in community forestry-related activities were due, at least in part, to utility-based tree-planting funding through Trees Forever. Methods utilized by Trees Forever to manage the flow of funds from utility companies encouraged tree planting and other tree-related activities or actions. These methods included the assignment of a community coordinator who encouraged planning and implementation. Survey participants supported the key role of the Trees Forever community coordinators by identifying those individuals as the most common source of tree-related information and volunteer tree-care training. Also, to encourage more than tree planting, the Trees Forever granting program required communities to show a commitment to long-term tree management before they were funded again.

According to Clark et al. (1997), the three keys to sustaining an urban forest are a healthy tree and forest

resource, community-wide support, and a comprehensive management approach. The Trees Forever program alone does not make a community forest sustainable, but it does encourage forestry-related activities that promote awareness, community-wide support, and some management of the community tree resource. The Trees Forever program demonstrates that guidance in developing an organized structure within a community can encourage more than just tree planting.

In addition to the support provided to communities through Trees Forever, partnerships within the Iowa Urban and Community Forestry Council have allowed different groups to work together to provide a variety of other tree-related services to Iowa communities. For example, 43 communities in this study indicated that they hosted Iowa State University tree care workshops, supported by the council, to train local volunteers.

Can communities continue to promote tree planting and other forestry-related activities if funding from external sources, such as investor-owned utility companies, is no longer available? Nearly half (45%) of the volunteers in this study agreed that the commu-

nity tree-planting program would stop without outside funding. However, one-third (33%) of the respondents disagreed, indicating they felt that tree planting could continue in their communities without financial assistance from external sources. Additional studies of Iowa communities will be necessary to determine whether the initial seed money and organizational support to communities was enough to encourage long-term forestry-related activities and management.

The system used by Trees Forever to administer external funding could be particularly useful in communities with limited resources that are trying to develop a community tree program. This program provided money to get started along with guidance and support that promoted more than just tree planting. For example, half (50%) of the communities in this study with a population between 1,001 and 10,000 indicated that they added a volunteer tree-planting group, a tree board, fund-raising activities, and a tree assessment or inventory of the community tree population after receiving utility funding through Trees Forever. Furthermore, a majority of the communities with a population less than 1,000 indicated they added a volunteer tree-planting group and a tree board. These results suggest that the benefits of externally funded community tree-planting programs may have the greatest impact when communities are also provided with guidelines, requirements, and volunteer support. Finally, statewide support and the cooperative efforts of Urban and Community Forestry Councils can strengthen the impact of tree-planting programs.

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Résumé. En 1990, les investisseurs-proprétaires des entreprises de services publics de l'Iowa ont commencé à distribuer des fonds pour la plantation d'arbres dans les communautés par le biais de l'organisation sans but lucratif « Trees Forever ». Un questionnaire a été envoyé aux 268 personnes volontaires de « Trees Forever » dans les communautés de l'Iowa afin (1) de mesurer le degré d'augmentation des activités forestières communautaires dans les villes qui ont reçu des fonds à la plantation d'arbres via cet organisme, et également (2) pour recueillir les impressions des gens à propos de cet organisme et sur les autres organismes subsidiaires externes à la communauté. Le taux de réponse a été de 63%. Quarante-vingt-deux pour cents des communautés qui ont répondu au sondage ont parlé d'une augmentation des activités reliées à la foresterie (ex.: groupement volontaire de plantation, comité de l'arbre, activités de levée de fonds, inventaire d'arbres) après avoir reçu des fonds de « Trees Forever » pour la plantation d'arbres, et 40% d'entre elles ont réalisé jusqu'à quatre nouvelles activités dans ce domaine. Quarante-vingt-deux pour cents des répondants ont indiqué qu'ils étaient d'accords ou fortement d'accords que leur programme communautaire de plantation n'aurait pas vu le jour sans les fonds externes des compagnies de services publics. Nos résultats suggèrent que les bénéficiaires des fonds externes de programmes communautaires de plantation d'arbres auront le plus d'impact si le support enthousiaste de la communauté peut être encadré et canalisé par une fondation ou un organisme volontaire de coordination.

Zusammenfassung. 1990 begannen die privaten Energieversorgerunternehmen in Iowa durch eine nicht-gewinn-orientierte Freiwilligenorganisation "Trees Forever", den Gemeinden Fördermittel für die Pflanzung von Bäumen zu Verfügung zu stellen. In Iowa wurden 268 Freiwillige dieser Organisation befragt, in einer Umfrage zu klären, ob erstens ein Anstieg von Pflanzaktivitäten in den Gemeinden, die Zuschüsse erhalten haben, festgestellt werden konnte und zweitens Meinungen aus der Gemeinde zu "Trees For-

ever" und anderen externen Förderstellen zu sammeln. Der Rücklauf betrug 63%. 82 % der befragten Gemeinden konnten einen Anstieg einiger forstverwandten Aktivitäten verzeichnen (z.B. freiwillige Pflanzgruppen, Baumbörse, Aktivitäten zur Beschaffung von Fördermitteln, Baumbestandsaufnahme), nachdem sie durch "Trees Forever" Fördermittel erhalten hatten und 40 % fügten mehr als 4 neue Aktivitäten hinzu. 82 % der Antworten zeigten entweder große Zustimmung oder vertraten die Ansicht, daß das kommunale Pflanzprogramm ohne die Unterstützung der versorgungsunternehmen nie hätte gestartet werden können. Unsere Ergebnisse zeigen, daß die externe Förderung derartiger Programme ihre größte Wirkung hat, wenn der Enthusiasmus dieser Unterstützung durch die Förderstelle oder einer Freiwilligenorganisation organisiert und in die richtigen Kanäle geleitet werden kann.

Resumen. En 1990, en Iowa se empezó la distribución de fondos a las comunidades, para la plantación de árboles, a través de la coordinación de voluntarios de la organización no lucrativa Trees Forever. Se envió un cuestionario a 268 voluntarios con el fin de: 1) medir el incremento en las actividades con los árboles en las comunidades que recibieron el apoyo, y 2) recoger opiniones acerca de Trees Forever por parte de las comunidades y agencias externas. El porcentaje de respuesta fue del 63%. Ochenta y dos por ciento de las comunidades que respondieron acerca de sus actividades mostraron un incremento en ellas (Por ej. Plantación, reuniones, inventarios) después que recibieron los fondos a través de Trees Forever, y 40% agregaron cuatro actividades nuevas. Ochenta y dos por ciento respondieron que sus trabajos con los árboles no hubiesen podido desarrollarse sin ayuda externa. Nuestros resultados sugieren que los beneficios de la ayuda externa a las comunidades en programas de plantación de árboles, tendrán un impacto tremendo en el entusiasmo de las comunidades y que puede ser canalizado a través de la coordinación de voluntarios de la agencia.