

# TREE CARE ADVISOR: A VOLUNTARY STEWARDSHIP PROGRAM

by Gary R. Johnson

**Abstract.** Fifty-two urban forestry volunteers completed a specialized training program that included thirty classroom hours of training and a pledge of a minimum of fifty hours of service to urban forestry educational programs and projects in two Minnesota urban-centered areas. As part of a two year pilot program developed by the Minnesota Extension Service and the Minnesota Department of Natural Resources Division of Forestry, the volunteers contributed more than 2000 hours of service and program assistance to their communities over a period of fourteen months. The training program has developed into a continuing Minnesota Extension Service specialization training program for Master Gardeners and non-Master Gardeners, and will be expanded to more rural and small community areas of the state.

In 1992, the University of Minnesota Extension Service and the Minnesota Department of Natural Resources cooperatively initiated the development of an urban forestry training program, targeting individuals who would serve as urban and community forestry project volunteers following the training. Funding for the two year pilot program was provided through a focus funding grant from the USDA Forest Service Northeastern Area, State and Private Forestry. The pilot proposal specified that three training programs would be developed and offered to individuals in urban-centered regions of Minnesota.

Similar para-professional training programs have been developed in various regions of the United States. In Los Angeles, Tree People established a program for training citizen volunteers in arboriculture, and certified participants as Citizen Foresters [3]. In New York City, Citizen Pruners were trained by the Street Tree Consortium and were given permission to prune trees and remove girdling wires as they saw necessary [2].

The Sacramento County Cooperative Extension Service in California developed a tree care educational program for citizen volunteers, targeting residents of specific neighborhoods in Sac-

ramento. These residents became active in neighborhood urban forestry stewardship activities, which ranged from planting and maintenance projects to educational programming [1].

**Demand for volunteers.** The demand for developing a urban forestry stewardship program in Minnesota came primarily from the Minnesota Extension Service's [MES] Master Gardener Program and its county coordinators, and the Minnesota Department of Natural Resources [MNDNR] Division of Forestry. Minnesota has an extensive network of volunteer Master Gardeners, over 1200 active members, and the county coordinators reported a significant increase in urban forestry related questions and issues confronting Master Gardeners.

At the same time, the MNDNR Division of Forestry was assuming a larger role in statewide urban forestry issues and education, and felt a need existed to build a network of trained volunteers, strategically located throughout the urban-centered areas of Minnesota. The MNDNR could refer citizens to these trained volunteers for answers to basic questions on tree care and tree health.

**Building support.** The role that the urban forestry volunteers would play in Minnesota, and the nature of their training curriculum were extensively debated issues. To strengthen the acceptance and ensure the success of the program, an exhaustive effort was made to contact as many of the people and agencies that would be impacted by the activities of these volunteers. From September, 1992 to January 1993, approximately forty urban forestry professionals, county Master Gardener coordinators and state agency forestry/tree health professionals were interviewed; furthermore, these individuals served as reviewers of the program development throughout the entire process.

During the interview process with these individuals, four questions were asked and discussed: 1) What title should these volunteers be awarded following training? 2) What information should be included as part of their training? 3) How could they be useful to you personally? 4) What major "roles" would they be most qualified to fill as volunteers?

**Title.** "Master Arborist" was initially suggested as a title for those that would complete this program, but this label was very unpopular with those we interviewed. Citizen Forester, Urban Forest Tree Advisors, Arboricultural Trainees, Volunteer Tree Care Givers, Tree Care Advisors, Anything But Master Arborist, Assistant Community Foresters, Urban Forest Stewards and Neighborhood Tree Stewards were all suggested as potential titles. In the end, Tree Care Advisor was the consensus choice; this title was considered the most descriptive and the most understandable to the general public.

**Educational "Needs List."** During the interview process with individuals, a list of desired skills and information was developed. Following all interviews, the "needs list" was collapsed into a ten point "information block" list. These ten general categories directed the content of the curriculum design: pruning, problem diagnosis, root systems, planting techniques, educating groups, plant selection, construction damage, soils, winter protection, and hazard trees.

**Roles of the Tree Care Advisor.** The definition of the role that Tree Care Advisors would serve in Minnesota urban forestry was a critical step in the planning process. Many public and private tree care professionals were concerned that these volunteers might unfairly impact on the private consulting profession, and/or give out poor or misleading information to the public. However, a consensus agreement on the roles of the Tree Care Advisor led to an acceptable job description, and averted alienation between the Tree Care Advisor program and the profession.

*Tree Care Advisor [TCA] volunteers will provide their communities and the State of Minnesota with a valuable pool of educated stewards for our urban and community forests. Tree Care Advisors will be expected to fulfill volunteer roles as edu-*

*cators and facilitators, enabling the Minnesota Extension Service [MES] and other agencies and programs operating through the MES to more effectively help others help themselves. It is emphasized that the majority of the volunteer hours are to be spent in the individual TCA's community, when practical and possible. Tree Care Advisors will be ultimately responsible to the MES...but it is anticipated that the TCA may work with many different people, agencies and groups...you will help the public with their tree-related questions by providing information or directing them to resources.*

**Administration.** The Tree Care Advisor Program is essentially an educational and outreach program. For that reason, it was agreed that the Minnesota Extension Service (MES) would serve as the administrative body, under the direct supervision of the campus-based urban forestry specialist. Programming was conducted through county extension offices, with the cooperation and involvement of the county extension educators. Certified Tree Care Advisors refer to the cooperating county educators as well as the campus-based faculty for information and problem solving. Tree Care Advisors are required to document their activities and volunteer hours with the county Master Gardener coordinators and the campus-based urban forestry specialist.

The MES Master Gardener Program was the most visible aegis for the Tree Care Program primarily because an original intention of the program was to focus the Tree Care Advisor training as a specialization for existing Master Gardeners. This along with the existing administrative framework of the MES Master Gardener Program made it the most logical administrative body.

**Targeting the audience.** The audience for this training program was originally restricted to metropolitan Minneapolis/St. Paul, a seven-county area with a population of approximately 2.5 million residents. One other urban center was to receive a pilot training program. Master Gardeners and professional horticulturists in the Rochester area [Olmsted county] expressed the most interest in this program, so Olmsted county was selected as the third pilot program site.

Certified Master Gardeners were targeted as the specific audience within these urban centers. These people had already received the 48 classroom hour core training program for Master Gardeners, satisfied at least one year of volunteer requirements, and would most likely be committed to further volunteer work. In the Minneapolis/St. Paul metropolitan area alone, there are more than 600 active Master Gardeners.

**Advertising the program.** The announcement of the training program was conducted primarily through the MES Master Gardener quarterly newsletters, county extension office announcements, and the Minnesota Department of Agriculture's quarterly newsletter [*Overstory*]. *Overstory* targets over 700 Minnesota State Tree Inspectors. In addition, many personal contacts were made by county extension educators and campus-based faculty to promote the program.

**Pilot program timeline.** The nature of the weather in Minnesota and its effect on the timing of activities precluded the success of conducting training programs in the spring and summer. Most of the urban forestry related activities to which volunteers could contribute occur in the months of April through September. Therefore, the majority of urban forestry/arboricultural training is conducted in late autumn and late winter.

The first pilot program was targeted for February and March of 1993, immediately following the MES Master Gardener core course program. The second pilot was held in the autumn of 1993, and the third and final pilot was conducted in the late winter period of 1994.

### Curriculum Development

The ten "information blocks" that were identified as critical by the reviewers of the program became the basis for the program curriculum. From these blocks, ten curriculum topics were developed: plant selection, plant/site selection, purchasing and handling nursery stock, planting techniques, winter protection for trees and shrubs, soils and fertility, pruning techniques, diagnosing plant problems, construction damage to trees/shrubs, and the urban forest as an ecosystem.

Behavioral objectives were developed for each curriculum topic, and an approximate classroom

hour requirement per topic was established. Minimum classroom contact hour requirements were established based upon the extent of behavioral objectives for each topic. After a review and revision of this plan, the syllabus and format for the pilot programs were finalized. There was no textbook for the training, but a selection of printed materials was compiled that was consistent with the topics and behavioral objectives and was treated as the core information manual for the training.

Particular care was made to avoid duplicating information covered in the MES Master Gardener core training course, whenever appropriate. Printed materials were frequently complementary to the Master Gardener training manual, but never identical. The same care was given to identifying the behavioral objectives. Tree Care Advisor training expanded on a basic understanding of botany and landscape practices that had been established during the Master Gardener training.

**Selecting participants.** Individuals interested in the program were mailed detailed information on the program that included: a history of the pilot program development, a job description for Tree Care Advisors, detailed explanation of the volunteer hours requirement, a syllabus and class schedule, a questionnaire about the individual's previous horticultural experience and education, an application form, and the fee requirement. Applications were reviewed by the Tree Care Advisor program coordinator and the county Master Gardener coordinators.

It had previously been decided that pilot training classes would be limited to twenty students. This was a bit arbitrary, but experience had shown that classes larger than 20 posed time problems when it came to giving individual attention. Applicants that were admitted to the program were notified by mail and telephone, and were issued a series of six journal articles. They were instructed to review these articles prior to the first class and that an examination would be given on these articles at the beginning of the first class. For program review purposes, this examination was treated as a pre-test.

The six journal articles were specifically chosen to be "controversial" in the sense that they chal-

lenged popular “myths” regarding tree health and care. The subjects addressed by these articles included: fertilization of trees and shrubs, pruning trees, insect control, plant health care, plant selection for urban areas, and biorational materials and practices.

The pre-test examination consisted of fifteen True/False, Multiple Choice questions; each question was worded in a manner that the examinee was forced to choose between a popular myth or a scientifically-based answer. Since “exam anxiety” commonly impacts an individual’s performance, examinees were instructed to not write their names on the exams. Exams therefore were graded and compared as class averages/frequencies, as opposed to an individual’s score.

**Format of the class.** Locations, times of the day and week, and length of the classes were intentionally varied. The first pilot was conducted on the St. Paul campus of the University of Minnesota, for five consecutive Saturdays. Each Saturday class began at 8:00 a.m. and concluded at 2:00 p.m., with a forty-five minute lunch break. The second pilot class was split between five evening sessions that were three hours in length, and two Saturday sessions that were seven hours each, for five consecutive weeks. The second pilot was conducted in the conference room of a county extension office. The third and concluding pilot class schedule and location was identical to the first.

All pilot program classes were conducted by the same instructor, the campus-based urban forestry specialist. Each pilot class syllabus included a minimum of three guest specialists: a plant pathologist, an entomologist, and a landscape architect and/or horticulturist. Audio-visual materials in the form of videos, slides and overheads were used extensively for instruction. Equipment, live and preserved samples and other materials were used specifically for the soils and fertilizers class and the diagnostic lab.

**Post-testing.** At the conclusion of each pilot training program, students were given a “final” exam; this exam was treated as the post-test for review purposes. The exam consisted of twenty True/False and Multiple Choice questions, and as with the pre-test was anonymous. Questions on

this exam were selected from information covered or required readings from the pilot training course. As with the pre-test, students from all three pilot training classes were given identical “final” examinations.

**Non-Master Gardener applicants.** Originally, it was intended that this pilot program would be available primarily to Master Gardeners. Part of the reasoning for this decision was that the academic background of MES Master Gardeners was a known variable, since they had all completed the core training program. Following the first pilot training session in St. Paul, however, a decision was made to accept non-Master Gardeners into the program, on a professional horticulturist basis. Applicants selected on this basis would be responsible for a greater registration fee, but would not be required to volunteer the mandatory fifty hours that the Master Gardener applicants agreed to contribute.

The reason for accepting non-Master Gardeners into the pilot training program was the nature of the distribution of Master Gardeners in Minnesota. Most Master Gardeners are in the Minneapolis/St. Paul metropolitan area. Outside of the metropolitan area, Master Gardeners are randomly dispersed, especially in the rural areas, and fewer of them are interested in urban forestry/arboriculture. It was hoped that by allowing applicants to register on a professional horticulturist basis, the program could draw upon a wider audience. Professional horticulturist applicants were subjected to the same screening processes, pre-tests and post-tests as the Master Gardeners.

**Recognition.** Upon completion of the training session, all participants were issued a certificate of completion for the program, signed by the TCA coordinator and the county extension office Master Gardener coordinator. Participants that were Master Gardeners and had agreed to fulfill the volunteer hour requirements earned permanent name tags that identified them as MES Tree Care Advisors. After each training session, a list of newly certified Tree Care Advisors was published in the *Overstory*, in the Master Gardener quarterly newsletter, and mailed to State agencies and metropolitan community foresters.

**Tree Care Advisor requirements.** A Tree Care

Advisor agrees to volunteer a minimum of fifty hours of involvement in tree and shrub care/urban forestry projects or programs during the first full year after completing the training. Those individuals that wish to remain Tree Care Advisors after the first year are required to submit a letter to the TCA coordinator stating their intention, volunteer thirty hours during the next year, and attend a minimum of ten classroom hours of update training in tree and shrub care/urban forestry. There are no renewal fees required, but all volunteer hours must be documented, and submitted on an official form.

**Update training and contact.** It was realized at the beginning of this program that approximately thirty classroom hours of instruction would be inadequate training for all the questions and situations that surround tree and shrub care and urban forestry. To this end, update training was identified and given a high priority to continue this training and education, and to maintain contact with the participants.

Update training is scheduled on a quarterly basis for the geographic regions where the pilot programs have been conducted. In addition to these specifically scheduled programs, county Master Gardener update programs are utilized to provide tree care information, as well as programs conducted by the MNDNR, Minnesota Department of Agriculture, Minnesota Horticultural Society, and the Minnesota Landscape Arboretum. Notices are sent to Tree Care Advisors of regional educational or training events in their areas, and they are encouraged to attend as many as possible.

**Newsletter.** A critical link with the Tree Care Advisors is the quarterly *Tree Care Advisor Newsletter*. This serves as a vehicle for members to contact each other regarding questions or programs, for technical update information, for announcements of educational and training programs, and for recognition of the efforts of members. Currently, this newsletter is edited by the Tree Care Advisor Program coordinator, the campus-based faculty in urban forestry. All TCA members receive this newsletter, non-Master Gardeners included, as well as the county extension office Master Gardener program coordinators. Newsletter supplements serve to provide the TCA members with current information on

arboriculture and urban forestry through new and updated MES bulletins and factsheets, as well as faculty summaries of regional and national professional meetings and workshops.

## Results

**Members.** As of June 1, 1994, fifty-two people had completed the Tree Care Advisor training program. Forty-two reside in the Minneapolis/St. Paul metropolitan area, and ten from the Rochester area [southeastern Minnesota]. The male:female ratio was 28:24; the Master Gardener:Professional Horticulturist ratio was 42:10.

There were no "typical" Tree Care Advisors, other than their common interests in urban forestry and working with the public. Ages ranged from the early twenties to the late seventies. Educational backgrounds varied from high school graduates to a few with doctorates. Most had extensive experience in gardening, tree and shrub care and working with the public either as professionals or as volunteers.

**Pre-test, post-test.** There was not a significant difference in pre-test and post-test examination averages among the different pilot training sessions, except perhaps between the pre-test averages of the first pilot session and the third as shown in Table 1. The post-test examination averages were within four percentage points of each other. These average scores should be put in perspective, however, since the examinations were anonymous, there was no pressure to study hard and memorize. Successful completion of the program was not contingent on an individual scoring a minimum on either exam.

**Table 1. Pre- and post-test class averages for the three pilot program training sessions:**

Class	Pre-test	Post-test
* St. Paul, 1993	69% (n=18)	75.5% (n=18)
** Rochester, 1993	70.8% (n=8)	72% (n=10)
** St. Paul, 1994	76.7% (n=18)	71.6% (n=19)

\*Class consisted of only Master Gardeners.

\*\*Class consisted of a combination of Master Gardeners and Professional Horticulturists.

The point that is notable, however, is the fact that including non-Master Gardeners in the training programs did not significantly lower class average examination scores, especially on the post-test examinations. In fact, the highest pre-test examination average score was achieved by the third pilot training group which had six non-Master Gardener members. The first training session was comprised of only Master Gardeners, and the second group had four non-Master Gardeners.

**Participant evaluations.** Two evaluations were completed by the Tree Care Advisor participants; one on the last day of the training session, and the other by mail in April, 1994. Evaluations given at the conclusion of the training sessions were to gain immediate feedback on the logistics of the course and the format. Out of fifty-two participants, only one person thought the location, and timetable for training was inconvenient. One person thought the material was repetitive from the Master Gardener core training program; all participants indicated that the material was neither too elementary or difficult. The quality of the teaching tools [videos, slides, overheads and samples] was rated as good [highest rating] by 85% of the participants.

The final evaluation survey mailed out in April, 1994, was to evaluate the Tree Care Advisors training experience and volunteer experience after they had an opportunity to interact with their communities. A Likert scale, with 1=most descriptive and 5=not at all descriptive was used to evaluate twenty-seven questions. Some key questions with average scores (n=20):

- The Tree Care Advisor training program adequately prepared me for volunteer duties. 1.85
- The written information I received as part of the training have been valuable references. 1.25
- The Tree Care Advisor newsletter has been timely and serves as valuable reference material. 1.38
- The class schedule was convenient for my life/work style. 1.5
- I prefer having a primary teacher and guest lecturers for the training sessions. 1.45
- When I "advertise" myself as a Tree Care Advisor, people generally understand what I

do and how I can help them [name recognition]. 3.6

- I have been able to accumulate the volunteer hours without much trouble. 2.63
- I plan on remaining an active Tree Care Advisor. 1.1.

**Volunteer hours.** A summary of volunteer hours was conducted on June 1, 1994, shown in Table 2; this included the twenty-two graduates from the February-March, 1994 class. A total of 2179 volunteer hours had been documented; accumulated volunteer hours were categorized as follows:

**Table 2. Categories of volunteer hours**

Activity	Total hours
Educational	1038
Personal/phone contacts	307
Garden shows/booths	51
State Fair booths	96
Arbor Day, Arbor Month, Earth Day	215
Planting, tree care projects [schools]	90
Community forestry projects	116
Special projects	266

Educational activities accounted for almost 50% of the hours volunteered by Tree Care Advisors. These were defined as public school programs, and neighborhood, community or county programs that were related to natural resources/urban forestry education, but not specific to Arbor Day, Arbor Month or Earth Day educational programs. Many of the programs Tree Care Advisors were involved with were cooperative programs with other State agencies and non-profit groups.

Personal and/or telephone contacts were volunteer hours contributed exclusively by TCA's who were also Master Gardeners. Answering county Master Gardener "help-lines" is a popular and traditional role that Master Gardeners serve in Minnesota. Hours documented as TCA appropriate were related to tree and shrub care, plant selection, and problem diagnosis.

Community forestry projects involved TCA's as active participants, usually as supervisors in community tree planting or tree maintenance projects. These projects were not related to specific Arbor Day, Arbor Month or Earth Day projects.

Therefore, if the volunteer hours for both community projects and event projects such as Arbor Day are collapsed into one activity category, there were a total of 331 hours dedicated to community tree planting and maintenance projects.

## Discussion

The success of the Tree Care Advisor Program, albeit short-term at this point, could be attributed to several factors:

1. *The collaborative nature of the program development.* The entire program design and development including the title of the program was the result of extensive involvement and review by a large number of professionals and educators; this aided the initial acceptance of the program. Agency, municipal and private professionals were aware of the program's development and many were eager to work with these trained volunteers. Requests for TCA assistance, especially during the months of urban forestry educational programming were frequent, and TCA's earned the reputation of cooperative and reliable para-professionals.

2. *The cooperation of MES county Master Gardener coordinators.* This was the most important factor that determined the successful implementation of the program. The county extension educators were the most effective advertising and marketing agents for the program, and assumed much of the responsibilities for facilities arrangements.

3. *Support of MES specialists, University of Minnesota faculty and State agency professionals.* Many agency professionals contributed technical support, either as instructors or as contributors of printed technical information. Since classes were conducted on Saturdays and evenings, it was necessary for cooperating instructors to adjust their schedules for non-traditional teaching hours.

4. *Recognition of Tree Care Advisors and their accomplishments.* People who volunteer their time and expertise to benefit their community appreciate recognition. The certificates of program completion and name tags were minimal forms of recognition. More important were newspaper and newsletter articles that recognized their activities, letters of appreciation from cooperating agencies

and schools and the respect of urban forestry professionals.

5. *Continued technical support.* Tree Care Advisor volunteers must have access to current technical information if they are to serve effectively. MES campus-based faculty and specialists, and county extension coordinators provide the most direct response to questions, and resources for school and community educational programs. In addition to MES, the MNDNR Division of Forestry provides most of the technical support for Arbor Day, Arbor Month and Earth Day educational and project activities.

Tree Care Advisors have access to the MES county office Master Gardener reference libraries. Registration fees for the pilot programs were used in part to expand these libraries to include technical tree care information in the forms of printed reference materials, videos and slides.

Educational update sessions are most valuable as "hand-on" opportunities for TCA's. These sessions, usually in the form of a field workshop, are timed to address seasonal issues and provide intensive training and information. Update sessions to date have included information and training on identifying hazardous trees, pruning fruit trees, pruning conifers, fertilization of shrubs and trees, vertical mulching and diagnosing plant problems.

## Future of the Program

Tree Care Advisor training programs have been scheduled for three urban areas in the near future; two in the autumn of 1994 [Rochester and Duluth], and one in late winter, 1995 [Minneapolis/St. Paul]. The increased interest in the program in the metropolitan areas of Minneapolis/St. Paul and Rochester have justified annual programming.

The expansion of the program into other areas of greater Minnesota poses logistical problems, in particular areas that are primarily rural. However, the need for urban forestry/tree care volunteers has been expressed by county extension offices and MNDNR field foresters. Long-range planning to expand the TCA Program into these areas has involved more State agency cooperation, in particular the MNDNR Division of Forestry and the Minnesota Department of Agriculture. Agency cooperation will be critical for utilizing more re-

gional experts as program instructors, providing instructional facilities and materials, and supporting the certified TCA's in their volunteer activities.

Presently, the curriculum and instructional materials are being reviewed and revised. A Tree Care Advisor training manual is being compiled, and a TCA member advisory committee will be in place by autumn, 1994.

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**Résumé.** Partie intégrante d'un programme pilote de deux ans développé par le Service de Diffusion Externe du Minnesota et par la Division Foresterie du Département des Ressources Naturelles du Minnesota, cinquante-deux volontaires ont contribué pour plus de 2000 heures de services aux programmes de foresterie urbaine de leur communauté sur une période de 14 mois. Le programme de formation, développé au sein d'un programme spécialisé de formation continue du Service de Diffusion Externe du Minnesota, visait la formation de maîtres-jardiniers et de jardiniers, et sera élargi aux communautés rurales et plus petites de l'état.

**Zusammenfassung.** Als Teil eines zweijährigen Pilotprogramms, welches vom Minnesota Aufbaudienst und des Departments für natürliche Rohstoffe, Abteilung Forstwirtschaft entwickelt wurde, leisteten 52 Freiwillige mehr als 14 Monate lang über 200 Dienststunden in Stadtförstprogrammen ihrer Gemeinden. Das Trainingsprogramm des Minnesota Aufbaudienstes hat sich kontinuierlich zu einem Spezialtraining für Gärtenmeister und Nicht-Gärtenermeister entwickelt und es wird sich in mehr ländliche und kleinere Gemeinden des Staates ausdehnen.