

URBAN FORESTRY IN SELECTED MIDWEST CITIES¹

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During the past decade, managing city trees and forests has become an increasingly important part of improving urban environments. This has placed added emphasis on skills involved in managing urban forestry programs. Ottman and Kielbaso (2) have described the evolution of urban forestry expertise needed as changing from a semiskilled ability to control tree growth to that of professional integration and maintenance of natural elements within man-made urban environments.

Because urban forestry is a relatively young profession, there is little to guide municipalities wishing to establish such programs. This research summarizes some major characteristics and responsibilities of urban foresters based on studies in selected cities throughout the midwestern United States. These summaries allow urban foresters to compare their programs with those in other communities, and provide communities with guidelines for developing urban forestry programs.

Methods

Data for this study were collected from 15 midwestern cities using structured in-depth personal interviews with urban foresters (1). The cities sampled included Indianapolis and Fort Wayne, Indiana; Louisville, Kentucky; Ann Arbor, Flint, Grand Rapids, Lansing, and Warren, Michigan; and Akron, Cincinnati, Cleveland, Columbus, Dayton, Springfield, and Toledo, Ohio. Population size of these cities ranged from 73,700 to 711,000. Interviews consisted of 31 predetermined open-ended questions plus follow-up questions to clarify answers. Questions focused on two major aspects of the urban forestry programs: (1) characteristics of each urban forester, including title, salary, education, experience, and job definition and perception; and (2) responsibilities of each urban forester, in-

cluding budgeting, determination of program direction, and program administration.

Results and Discussion

Characteristics of the urban forester

Title and Salary. Urban foresters sampled were classified under ten different occupational titles (Table 1). Although nine were referred to as some type of forester, none was specifically called urban or community forester. Reported 1978 salaries averaged \$19,800 and ranged from \$15,000 to \$26,000 (Table 2).

Education. Nine of the fifteen foresters had an undergraduate degree in forestry; four had Master's degrees specializing in urban forestry (Table 3). Academic preparation not only provided cities with trained urban foresters; it also resulted in higher salaries. The average annual salary of high school graduates employed as urban foresters in 1978 was \$17,666. Average annual salary rose to \$21,187 with a Bachelor's degree and \$22,000 with a Master's degree. It appears that communities are not paying significantly higher salaries for urban foresters with advanced degrees, but rather are concerned with obtaining qualified individuals.

Experience. Prior work experience of all of the urban foresters interviewed involved some form of tree work (Table 4). However, there appeared to be little salary advantage for an individual with prior experience in a municipal setting. Urban foresters with prior municipal work experience earned an average annual salary of \$20,287; others averaged \$21,285 per year.

Job Perception and Security. Each urban forester was asked to define or describe his professional responsibilities. Twelve perceived their role in the city as being responsible for planting and maintaining plant material. Others included additional responsibilities such as managing municipal plant material to provide social values

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and benefits including aesthetics, visual screens, and microclimate modifications. Interestingly, all described themselves as vegetation managers, although during interviews many indicated that a large proportion of their time was spent in personnel management. Unquestionably, to be effective in cities of these sizes, urban foresters must not only be technically competent vegetation managers, but also skilled in personnel management, labor relations, budgeting, accounting, and finance.

Ten urban foresters attributed job security to Civil Service status, but suggested a continuing need to justify their program's existence in order to receive adequate funding. Two expressed some concern that continuation of their position was highly dependent upon efforts to ensure adequate budget appropriations. All urban foresters interviewed shared a belief that their programs' existence and funding required continual explanation and justification.

Responsibilities of the urban forester

Budgeting. An urban forestry program is dependent on securing a portion of city budgets. All but one of the urban foresters interviewed were responsible for developing an annual operating budget. Fourteen cities reported 1978 annual budgets ranging from \$335,000 to \$1.1 million (Table 5). This included all money budgeted in support of urban forestry whatever the source. The 1978 mean annual expenditure per capita for urban forestry in the sampled midwest cities was \$3.19 (Table 6).

Most funding was derived from general property taxes. Of the eleven cities utilizing supplemental funds, nine relied on Federal assistance such as Community Development Block Grants, CETA personnel, Urban Development Action Grants, and Revenue Sharing. Other forms of funding reported included a property owner frontage tax and an endowed trust fund.

Public safety and development of an aesthetically pleasing environment were the two reasons commonly used to justify urban forestry programs and to defend budgets. While the urban foresters interviewed believed in the value of their programs, two specifically noted that the ex-

istence of their program and its budget should be a lower priority than essential services such as police, fire, and sanitation.

Table 1. Occupational titles of sampled midwest urban foresters.

| <i>Title</i> | <i>Number using title</i> |
|--------------------------------------|---------------------------|
| Forestry Superintendent | 3 |
| City Forester | 2 |
| Forestry Supervisor | 2 |
| City Arborist | 2 |
| Commissioner of Forestry | 1 |
| Parks Forester | 1 |
| Commissioner of Shade Trees | 1 |
| Supervisor of Horticulture | 1 |
| General Supervisor of Park Resources | 1 |
| Parks Operation Manager | 1 |

Table 2. 1978 Annual salary of sampled midwest urban foresters.

| <i>Salary (dollars)</i> | <i>Number earning salary</i> |
|-------------------------|------------------------------|
| 15,000 to 17,499 | 3 |
| 17,500 to 19,999 | 3 |
| 20,000 to 22,499 | 3 |
| 22,500 to 24,999 | 3 |
| 25,000 to 26,000 | 3 |

Table 3. Education of Sampled Midwest Urban Foresters.

| <i>Educational Level Attained</i> | <i>Number at that Level</i> |
|-----------------------------------|-----------------------------|
| High School Graduate | 3 |
| B.S. in Horticulture | 1 |
| B.S. in Landscape Architecture | 2 |
| B.S. in Forestry | 5 |
| B.S. and M.S. in Forestry | 4 |

Table 4. Professional backgrounds of sampled midwest urban foresters.

| <i>Professional background</i> | <i>Number with background</i> |
|--------------------------------|-------------------------------|
| Assistant City Forester | 3 |
| Woodlands Forester | 3 |
| Private Tree Contractor | 2 |
| City Landscape Architect | 1 |
| City Planner | 1 |
| City Tree Trimmer | 1 |
| City Grounds Keeper | 1 |
| City Forestry Intern | 1 |
| Utility Tree Trimmer | 1 |
| Nurseryman | 1 |

Identification of Program Direction. In general, urban foresters interviewed equated determining program direction with identifying responsibilities or work to be done. This was accomplished through (1) public contact, (2) tree inventories, and (3) employee reporting.

All urban foresters interviewed reported using public contact in some form (Table 7). Seven of these foresters viewed their operations as using formal public relations programs not only to identify work, but to educate the public and as a method of increasing support for their programs. It is interesting to note that the seven cities with active public relations programs spent an average of \$4.06 per person on urban forestry in 1978 while the remaining cities spent only \$2.33. Cities with active public relations activities also averaged eight more urban forestry employees than the other cities.

Municipal tree inventories and employee observations played a less important role than public contact in determining the direction of most urban forestry programs in cities interviewed. Five cities had usable inventories, two were computerized, two were on file cards, and one was mapped. The remaining cities either had no inventory or it was incomplete or outdated. Employee observations were used formally in two cities that took dead tree surveys. All of the cities informally incorporated reported employee observations in work planning.

Program Administration. The most important and demanding administrative duties reported by foresters were (1) the development and review of work schedules, (2) staff and committee meetings, (3) mediation of labor disputes, (4) checking time cards, (5) internal correspondence, (6) supplies requisition, purchase and follow-up, (7) public relations, (8) budget planning, and (9) record keeping. This list of administrative duties reflects the fact that most urban forestry work in these cities was performed by city employees (Table 8) using city owned equipment (Table 9). Employees of all but one of the cities were unionized. Half of the foresters interviewed expressed at least some difficulty in dealing with personnel and unions. Accordingly, most repeatedly stressed the importance of personnel manage-

ment and labor relation skills. Most foresters also had extensive equipment inventories to manage (Tables 9 and 10).

The annual cycle of urban forestry activities reported was as expected for the midwest. Planting tended to follow a fall through spring schedule. Activities such as fertilizing, watering, and construction were performed in the spring and summer. Year-round operations included tree and stump removal, trimming, and equipment maintenance. Public contacts peaked during spring and fall but were considerable throughout the summer. Winter served as the planning time with emphasis on such activities as budget preparation, planting site identification, determination of needed plant material, and materials and equipment purchase and maintenance.

Table 5. 1978 Annual budget reported by sampled midwest urban foresters.

| Annual budget (dollars) | Number reporting |
|-------------------------|------------------|
| 300,000 to 399,000 | 2 |
| 400,000 to 499,999 | — |
| 500,000 to 599,999 | 4 |
| 600,000 to 699,999 | 2 |
| 700,000 to 799,999 | 2 |
| 800,000 to 899,999 | 2 |
| 900,000 to 999,999 | — |
| 1,000,000 to 1,099,999 | 1 |
| 1,100,000 to 1,199,999 | 1 |

Table 6. 1978 Average annual expenditure per capita reported by sampled midwest urban foresters.

| Expenditures per capita (dollars) | Number reporting |
|-----------------------------------|------------------|
| 0.50-0.99 | 1 |
| 1.00-1.99 | 4 |
| 2.00-2.99 | 2 |
| 3.00-3.99 | 2 |
| 4.00-4.99 | 3 |
| 5.00-5.99 | 1 |
| 6.00-6.99 | 1 |

Table 7. Public relations techniques used by sampled midwest urban foresters.

| Technique | Number using |
|---------------------|--------------|
| Mass media | 10 |
| Public meetings | 12 |
| Individual contacts | 14 |

Table 8. Number of urban forestry workers in sample midwest cities in relation to city population.

| <i>City population</i> | <i>Range in number of urban forestry workers</i> |
|------------------------|--------------------------------------------------|
| 100,000-149,999 | 6-21 |
| 150,000-199,999 | 5-40 |
| 200,000-399,999 | 9-45 |
| 400,000 + | 15-20 |

Table 9. Types of equipment owned by sampled midwest urban forestry agencies.

| <i>Equipment</i> | <i>Number reporting</i> |
|------------------|-------------------------|
| Chain saws | 15 |
| Chippers | 13 |
| Trucks | 11 |
| Aerial towers | 11 |
| Sprayers | 8 |
| Stump cutters | 6 |
| Log movers | 6 |
| Tree spades | 5 |
| Tractors | 5 |
| Log splitters | 4 |

Table 10. 1978 Replacement cost of city-owned equipment reported by sampled midwest urban foresters.

| <i>Replacement cost (dollars)</i> | <i>Number reporting</i> |
|-----------------------------------|-------------------------|
| 100,000 | 2 |
| 150,000 | 1 |
| 200,000 | 1 |
| 250,000 | 2 |
| 300,000 | 2 |
| 350,000 | 2 |
| 550,000 | 1 |
| 1,000,000 | 1 |

Summary

Urban forestry in medium-to-large midwestern cities is diverse, both in terms of the kinds of people doing the job and the skills required of those people. Urban foresters interviewed in this study had varied professional background and identities. They were identified by 10 different professional titles. Their 1978 salaries ranged from \$15,000 to \$26,000. Educational backgrounds ranged from a high school diploma to a Master of Science. A large number had professional experience in tree maintenance prior to becoming an urban forester.

For the most part, the urban foresters perceived themselves as vegetation managers. However,

they reported spending a large proportion of their time managing people and money. They were intimately involved in fiscal responsibilities such as developing and justifying annual budgets, soliciting supplemental funds, payrolls, and purchasing and maintaining supplies and equipment. Commonly cited personnel management activities included staff and committee meetings, work crew supervision, mediation of labor disputes, and union negotiations.

Urban foresters reported being responsible for program direction. However, most equated program direction with identifying responsibilities or work to be done rather than with policy decisions concerning major programs. This task-oriented type of program direction will "get the job done," but will tend to perpetuate existing programs. It may not be very creative nor responsive to needed major program changes. In some instances, this limited perspective may result from the amount of policy-setting responsibility urban foresters actually have within the city government. In other instances, it may be the result of a lack of administrative training and experience.

"Multidisciplinary" seems to truly characterize the midwestern urban forester. Not only must he be a technically competent vegetation manager, but he needs skills from almost all aspects of business and personnel management, communication, and public relations. Certainly, if an urban forester is to be more than a technician in a government hierarchy, he must understand how that government works and be adept in managing the business and personnel aspects of his organization. The importance of these professional talents needs to be recognized by urban foresters seeking professional improvement through short courses and seminars, by cities hiring urban foresters, and by educational institutions preparing courses for practicing professionals and curriculum for training new urban foresters.

Literature Cited

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