Lessons Learned When Increasing Natural Land Management Practices in Urban Park Environments

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Key Words

Municipal parks, Natural management, Alternative land management (ALM)

Background

Texas Municipal Park and recreation providers have faced complicated issues due to drought, flooding, budget and staffing constraints, land fragmentation, land availability and urbanization. To reduce the burden of the maintenance levels required for highly manicured parks and to provide ecosystems and residents with more natural-like settings, many park departments and open spaces managers have adopted natural land management practices. These alternative land management (ALM) practices shift away from manicured practices (e.g., mowing, edging, planting flowers) to more natural practices (e.g., allowing native grasses and wildflowers to grow). The significance of alternative land management (ALM) continues to grow due to combined economic, ecological, an environmental situations 1,2,3,4,5,6,7.

To better understand the impacts of ALM practices, interviews were conducted with land managers and planners from The Mueller Community (Travis County), City of College Station Parks Department (Brazos County), City of Dallas Parks Department (Dallas County), and City of Houston Memorial Park District (Harris County).

Four themes emerged as areas for park departments and community leaders to review when considering implementing ALM practices:

Agency effects: decreased maintenance costs and ease of maintenance;

Environmental effects: natural reforestation and increased wildlife habitat

Park User Opportunities: enhanced well-being, wildlife observation, nature photography, and enhanced trail experiences; and

Emerging issues: ATV use, paint ball wars, establishment costs, education, managing invasive species, and measuring impacts.

Agency Effects

ALM practices can significantly reduce maintenance costs associated with land management. Using ALM practices decreases the cost of mowing, labor, transportation of maintenance equipment, wear and tear on maintenance equipment, and fuel (oil and gas). This enables agencies to save a significant amount of financial resources and allow their staff to focus their efforts on other projects or agency needs.

ALM practices can ease maintenance for staff. For example, at T.C. Jeter Park in Houston, tall native grasses were allowed to grow naturally along the edge of the bayou. This has developed into a “Natural Litter Net”. When trash, debris, and litter blow into the park, the tall native grasses catch the litter and prevent it from entering the bayou. This not only acts as a filter, protecting the bayou, but also concentrates the trash allowing the maintenance staff to pick up litter in a central location instead of roaming the entire park.

Environmental Effects

ALM practices promote natural reforestation. Park managers in Houston found that when they stopped mowing certain areas, pine trees started to emerge. They saved immeasurable amounts of money and resources by not having to reforest these areas themselves.

Additionally by allowing natural reforestation, they enhanced wildlife habitat. These habitats are home to hundreds of different species of birds. Furthermore, natural reforestation helps ensure park users will view specimen trees throughout the species enteric life cycle. For example, the problem of having a grove of many trees similar in age is that when one tree ends its life cycle and starts to die, all of the other tress will also soon die. By naturally reforesting, agencies allow tress of all different ages to grown in the area and helps reduce the chance of a massive loss.

Park User Opportunities

ALM practices provide unique recreational and contemplative opportunities for park visitors. These opportunities included but were not limited to wildlife

observation, nature photography, an enhanced trail experiences.

For example, the Dallas staff discussed that by increasing wildlife habitat, and in turn wildlife, park-users are able to enjoy more observation opportunities at the park such as bird watching, butterfly gazing, and even insects. Furthermore, because of these increases in wildlife habitat, including native Texas wildflowers and grasses, managers also noticed an increase in park users engaging in nature photography.

Additionally, leaders from all four communities indicated shifts to ALM practices afforded park users enhanced trail experiences. Instead of walking, hiking or riding a bike on a trail devoid of natural elements, they now experience viewing native grasses, wildflowers, trees of various sizes, and the associated habitats and wildlife.

Emerging Issues

Several emerging issues were discussed among all interviewees. One park director reported encountered issues managing new and increased use related to ATVs and paintball. Landscapes managed with a focus on allowing natural elements to grow inherently attracts these types of activities.

A district operations manager from Dallas explained, these landscapes afford visitors and park users elements of being hidden form others as well as provide characteristics which are suitable for these types of recreation such as: wilderness, remoteness, vastness, and being out-of-sight.

While increased use related to these two activities is not necessarily a bad thing, these behaviors need to be specifically located in areas designated by park managers and planners. For example, it is not desirable to have an ATV area near a bird-watching or restorative picnic area.

Another emerging issue discovered was high establishment costs of administering specific ALM practices. For example, in order to establish a wildflower meadow, park managers and planners in Dallas and Austin reported the need purchase seed, prepare the soil, sow the seed, and water the seed for it to establish itself. This process could prove costly for park agencies in the beginning stages. And, some costs could be mitigated or increased by certain weather conditions. However, in these cases once the area has been prepared and established, park agencies did report a drop in their maintenance costs.

Example of a "Natural Litter Net"

The interviewees illustrated how vital educating staff and community members can be in developing the support necessary for a municipality to successfully implement and sustain ALM practices. Interviewees indicated educational efforts needed to focus on both internal education to staff and external education to park users and community members.

Furthermore park agencies should develop specific trainings and educational materials for staff directly maintaining park lands. For example, it was explained that it can be difficult for staff to understand why a park agency is changing from mowing grass twice a week, at 2 inches for a 48 inch swath, to simply edging it every week and picking up trash. It was discussed how maintenance staff typically take pride in their work. Thus, it may be difficult for them to adjust to and adopt the new practices—particularly in phases when landscapes are somewhere between a well-manicured appearance and an abundantly natural appearance.

External education involves educating park-users and community members. Park agencies need to educate the public in order to avoid misconceptions regarding ALM practices. For example, Dallas learned that "one person's wildflower meadow may be another person's weed lot". In order to reduce misconceptions and increase park user and community member "buy in", agencies need to have an outreach plan for interacting with, educating, and working with stakeholders. For example, the Mueller Community developed a thematic brochure for park-users which highlighted the where, when, and why of specific ALM practices as well as encouraged community members to also be proactive and help reduce invasive species in their yards.

Invasive species also pose a particular problem for park agencies due to their volatile nature. In a short amount of time, invasive species can go from controlled to out of control. One operations mangers reported, the key is being consistent and preventative. Another suggestion to help minimize impacts of invasive species was to educate park users, staff, and managers to correctly identify them and to know the proper procedures for eliminating particular species. He encouraged incorporating tools such as signage, brochures, and media efforts into the aforementioned educational efforts.

When a park department or community employs ALM practices it is important to have a systematic and meaningful measure or set of measure to catalog the changes that take place in each management area as well as the associated impacts and outcomes. These could include factors such as reducing resources needed, costs, labor, landscape diversification, habitat changes, and park use levels, type, and satisfaction. Systematic measures and meaningful outcome data can be successful in highlight best ALM practices and provide a basis for evidence based changes in operations, design, and recreation activities.

Resources

•Online course via TRAPS Professional Development Courses http://agrilife.org/webcourses/2014/05/02/traps-professional-development-courses/

•Parkland and Open Space Planning: Urban and Municipal Park Programs (http://rptsweb.tamu.edu/extensionprograms/urbanandmunicipalparks/index.htm)

•Habitat Restoration in the Middle Trinity River Basin. Texas AgriLife Bookstore Publication ESP-392

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