



## Active Management Practices in Urban Environments: Understanding Community Attitudes and Awareness

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### What is the Issue?

Active management practices (i.e. prescribed burns, cutting, mowing, etc.) are often used for habitat restoration. The use of active management practices can be important tools for improving soil quality, reducing invasive species, and promoting native species. Historically the public, especially those in urban areas, has been resistant towards the use of active management practices. This resistance has led to active opposition that delayed the use of active management practices and halted restoration work altogether. Public discontent and resistance to the use of these practices can be due to many factors including an individuals' lack of knowledge about the active management practices and their benefits, safety concerns, or discontent with the change in the landscape's aesthetic (See *Restoration & Management Notes* 15.1, 1997, p.25-37).

### The Case of the Albany Pine Bush Preserve (APBP)

The Albany Pine Bush Preserve (APBP) is a 3,200 acre nature preserve just northwest of Albany, New York. The preserve borders an urban interface including the cities of Albany (pop. 97,856) and Schenectady (pop. 66,135) and the towns of Guilderland (pop. 35,303) and Colonie (pop 81,591) (U.S. Census, 2010). To maintain species diversity and ecosystem health, the Albany Pine Bush Preserve, like other early-successional habitats, requires active management techniques, such as the use of tree cutting, prescribed fires, and invasive species removal (Barnes, 2003). Thus, areas of the preserve are frequently changing from highly forested to open landscapes.

Because the land managed by the preserve is fragmented, there are many residential and commercial buildings that border or are within the perimeter of the preserve, and in some cases, businesses are surrounded by preserve land. Due to the highly-urbanized nature surrounding the preserve, active management techniques that border businesses, homes, and commercial spaces are particularly visible to the public. The preserve aims to raise public awareness and acceptance of their active management practices through:

- Education exhibits and programs at their Discovery Center
- Postcards and phone calls to residents living nearby about scheduled prescribed burns
- Signage near trail heads at the managed sites
- Follow-ups with upset residents in-person or by phone
- Media outreach

In the past, prescribed burns have been a particularly controversial topic in the Albany area, so the APBP has increased their outreach and communication efforts about their use.

### Methods

Between September and December 2016, individuals living within 10 miles of the APBP were surveyed through a combined mail and web survey. The mail survey sample was drawn from a 2015 database of residential homeowners from Albany, Schenectady, Saratoga, and Rensselaer counties. A random sample of 1,200 residential homeowners were selected to receive a mail survey. In addition, a list of individuals who had visited the APBP from 2013-2016 was compiled. A random sample of 1,200 people who had visited the preserve from 2013-2016 were contacted via email to participate in our study. The two samples were combined. We received a total of 434 surveys (188 by mail and 246 by web), 475 that were undeliverable, 29 refusals, and 2 ineligible due to age (under 18), for a total response rate of 22% (23% mail and 20% web). Individuals were categorized into either a visitor (n=316) if they had visited the preserve in the past or a non-visitor (n=88) if they had not visited the Albany Pine Bush Preserve.

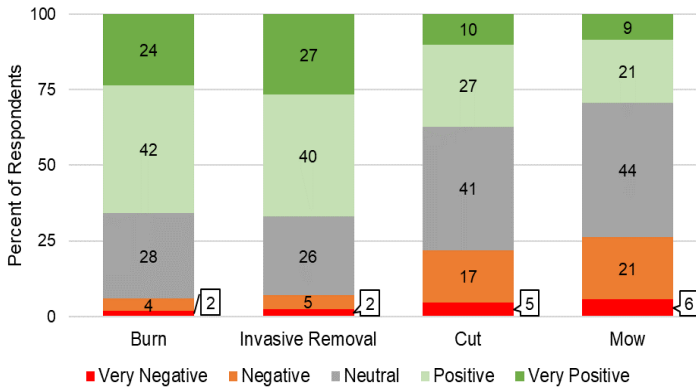
### General Attitudes Towards Active Management Practices

Individuals reported their feelings towards the use of four management practices in natural areas: prescribed fire, cutting of trees and plants to create openings in the forest, mowing of small trees and shrubs, and invasive tree and plant removal. Of the management practices, prescribed burns and invasive plant/tree removal were the most accepted (Figure 1). Fewer than 10% of individuals felt negatively about the use of prescribed burns or invasive tree and plant removal in natural areas. About 66% of respondents felt positively about the use of prescribed burns in natural areas. Similarly, 67% of individuals surveyed held positive feelings towards invasive tree removal. However, not all of the management practices were acceptable. Only 37% of individuals held positive attitudes towards cutting trees to create openings in the forest and 22% of individuals felt negatively about the use of cutting in natural areas.



Further, respondents held more negative opinions towards the mowing of small trees and shrubs. Only 29% of individuals felt positively about mowing and 26% of individuals felt negatively about their use.

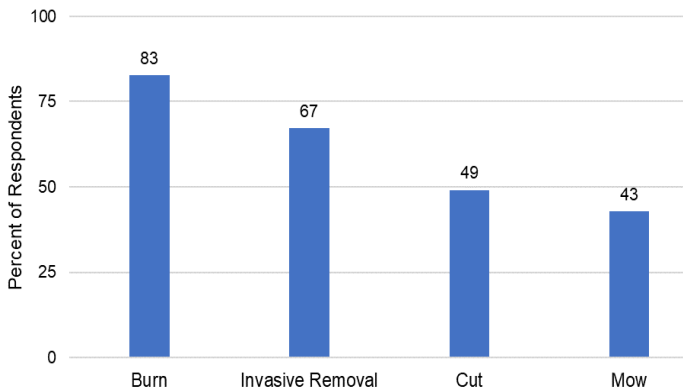
**FIGURE 1.** Attitudes toward active management practices



### Awareness of Active Management Practices at the APBP

Over 70% of respondents could identify two or more of the active management techniques used by the Albany Pine Bush Preserve. Most individuals surveyed (83%) were aware of the use of prescribed burns at the Albany Pine Bush Preserve. About 67% of individuals were aware of invasive plant or tree removal. And less than half of the individuals surveyed were aware of cutting of trees and small shrubs at the preserve (Figure 2). Overall, visitors were more aware of all of management practices than non-visitors.

**FIGURE 2.** Respondents' awareness of management practices at the Albany Pine Bush Preserve

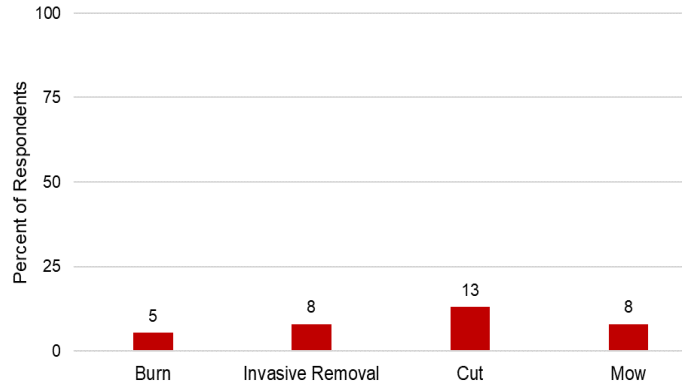


### Intention to Oppose Active Management at the APBP

In general, less than 10% of individuals indicated that they would oppose the use of management practices at the Albany Pine Bush Preserve in the next twelve months. Although individuals felt more negatively about the use of mowing than tree cutting, respondents were the most likely to oppose the use of tree cutting (13%) at the APBP than any of the other management practices (Figure 3). The removal of invasive plants and trees and mowing were the next likely to be opposed with about 8% of respondents indicating that they would oppose these practices. In contrast, only about 5% of individuals would oppose the use of prescribed fire within the

preserve. Further, only 8% of individuals who visited the preserve intended to oppose any of the four management practices compared to 12% of non-visitors.

**FIGURE 3.** Respondents' intention to oppose the use of active management practices at the APBP



### Conclusions and Recommendations

#### Land Managers:

While less than 10% of individuals would oppose the preserve's use of any single management practice, the percentage was higher from individuals who did not interact with the natural area. Therefore, land managers should target their outreach towards non-visitors in the area. In the development of outreach and communication materials it is important to remember that certain management practices are not as well accepted as others. Habitat management involving prescribed burns were less likely to be opposed than mowing, cutting, or the removal of invasive trees and plants. Individuals' opposition towards cutting and mowing appeared to be rooted in negative attitudes towards the general use of those practices. Therefore, it is important to use strategies to address the concerns of those with negative attitudes towards the management such as one-on-one interactions with the public to understand their concerns and address complaints, information about the practice and why it is used, and clear signage at management sites.

#### Environmental Educators:

While the use of prescribed burns was controversial in the past, we find that very few individuals intend to oppose prescribed burns as a management tool at the APBP. This may suggest that the techniques used by the APBP have been successful in promoting awareness and knowledge about the use of prescribed burns. Similar methods could be used to raise awareness and acceptance of other more controversial management practices such as cutting, mowing, and invasive plant removal. Techniques that environmental educators can employ include management-specific educational programming, outreach to the local media and social media outlets, and one-on-one interactions with the public to understand their concerns.

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