



## 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

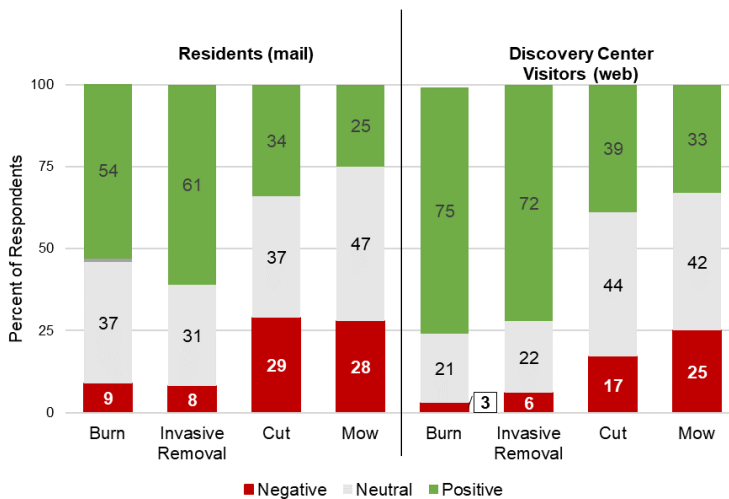
Between September and December 2016, individuals living within 10 miles of the APBP were surveyed through mail and web surveys. The mail survey sample was drawn from a 2015 database of residential homeowners from Albany, Schenectady, Saratoga, and Rensselaer counties. A random sample of 1,200 residential homeowners were selected to receive a mail survey. In addition, a list of individuals who had visited the APBP Discovery Center from 2013-2016 was compiled. A random sample of 1,200 people who had visited the APBP Discovery Center from 2013-2016 were contacted via email to participate in our study. We received 188 (24%) mail surveys and 246 (20%) web surveys.

### 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 in both samples (Figure 1). Fewer than 10% of respondents in both samples felt negatively about the use of prescribed burns or invasive tree and plant removal in natural areas. About 60% of residents and 75% of Discovery Center visitors held positive feelings about the use of prescribed burns and invasive tree removal. However, not all of the management practices were acceptable. Only about 35% of individuals from both samples held positive attitudes towards cutting trees to create openings in the forest and about 30% of residents from the mail sample and 17% of visitors from the web sample felt negatively about the use of cutting in natural areas. Respondents also held negative opinions towards the mowing of small trees and shrubs. Only 25% of residents and 33% of visitors felt positively about mowing and about 25% of individuals from both samples felt negatively about their use.



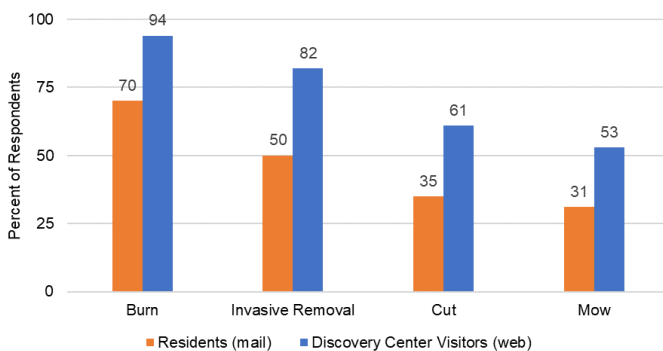
**FIGURE 1.** Attitudes toward active management practices



### Awareness of Active Management Practices at the APBP

Over 50% of residents and 84% of Discovery Center visitors could identify two or more of the active management techniques used by the Albany Pine Bush Preserve. Most individuals surveyed (70% mail and 94% web) were aware of the use of prescribed burns at the Albany Pine Bush Preserve. This was followed by invasive plant and tree removal (50% mail and 82% web) And less than a third of the residents were aware of cutting of trees and small shrubs at the preserve in comparison to over 50% of Discovery Center visitors (Figure 2).

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

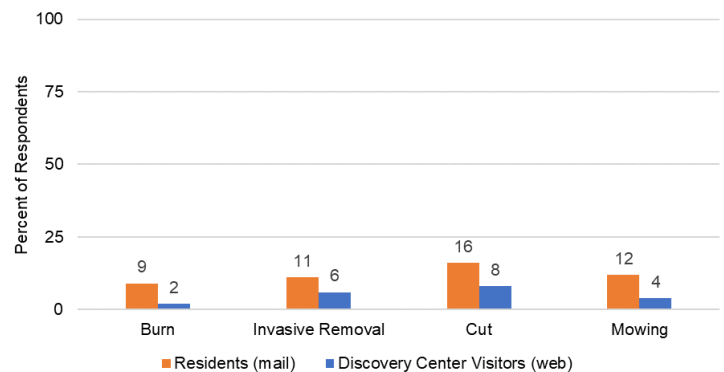


### Intention to Oppose Active Management at the APBP

In general, less than 16% of residents and less than 10% of Discovery Center visitors 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 (16% mail and 12% web) 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 12% of residents and 5% of Discovery Center visitors indicating that they would oppose these practices. Prescribed burns were the least likely to be

opposed by both residents and Discovery Center visitors (9% mail and 2% web).

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



## Conclusions and Recommendations

#### Land Managers:

While less than 1 in 5 of respondents would oppose the preserve's use of any single management practice, the percentage was higher for residents in the mail sample than Discovery Center visitors from the web sample. 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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