

# Results of the 2015 EAB Community Update Survey

*Conducted Jan. 21 to Feb. 6, 2015 by the*



**Colorado  
Emerald  
Ash  
Borer  
Response Team**

*The Colorado EAB Response Team is comprised of members from the following agencies/organizations: Boulder County, City of Boulder, Colorado Department of Agriculture, Colorado State Forest Service, Colorado State University Extension, Colorado Tree Coalition, Green Industries of Colorado, University of Colorado and USDA Animal and Plant Health Inspection Service.*

*Often it is the small things in nature  
that bring about big changes.*

–2015 EAB Survey Respondent

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# Background

The 2015 EAB Community Update Survey was conducted by the Colorado Emerald Ash Borer (EAB) Response Team, an interagency collaboration formed to help detect, control and prevent the human spread of EAB, a highly destructive tree pest.

EAB was first detected in Colorado in the City of Boulder in September 2013. EAB is an invasive, wood-boring beetle, native to China and eastern Asia that attacks and kills ash trees. It is responsible for the death of millions of ash trees in 25 states and two Canadian provinces, and it has cost municipalities, property owners, nursery operators and forest products industries billions of dollars to treat, remove and replace impacted trees. With ash species comprising an estimated 15-20 percent of all urban trees in Colorado, the insect poses a serious threat to Colorado's urban forests.

The 2015 EAB Community Update Survey was completed by members of both the public and private sectors who are directly or indirectly involved with or otherwise vested in the health of Colorado's urban forests, and also by several landowners. The survey was designed to give Colorado community members the opportunity to share their progress, challenges and best practices related to preparing for or actively responding to EAB in Colorado.

The results of the survey – as outlined in this report – will help the Colorado EAB Response Team to prioritize resources for EAB prevention and response. They also will inform EAB-related discussions in communities across the state and encourage inter-community collaboration. These results can also serve as a facts-based resource for high-level decision-makers and funding solicitors.

For current information about EAB in Colorado, including the quarantine in Boulder County and surrounding areas, go to [www.eabcolorado.com](http://www.eabcolorado.com). If you think you may have EAB in your ash trees, please contact the Colorado Department of Agriculture at 888-248-5535 or email [CAPS.program@state.co.us](mailto:CAPS.program@state.co.us).

# Executive Summary

Nearly 250 Coloradans responded to the 2015 EAB Community Update Survey. This included 117 public sector respondents from government, university and non-profit groups, as well as 130 private sector respondents representing arborists, landscape architects and a few private citizens.

Perhaps because EAB has not yet been detected outside the City of Boulder, respondents to this statewide survey most commonly reported that the impact of EAB on their organizations has thus far been low or moderate (although many respondents, especially in the public sector, report the impact as high or severe). Nevertheless, Colorado communities have begun to prepare for EAB's arrival. Approximately 77% of public-sector respondents and 53% of private-sector respondents have an EAB management plan in place or in development, and roughly three out of four respondents across sectors have already devoted time or money responding to the threat of EAB by conducting outreach; detection-related activities; and/or tree removals, treatments and under-plantings.

Despite relatively strong engagement levels among this stakeholder group, significant challenges remain when it comes to countering this pest. About one in 10 respondents across sectors say they need help developing an EAB management plan, and many list their lack of a plan among their top two EAB-related challenges. Lack of public awareness is another major challenge, with 40% of public sector respondents and 73% of private-sector respondents listing it among their top two EAB-related challenges.

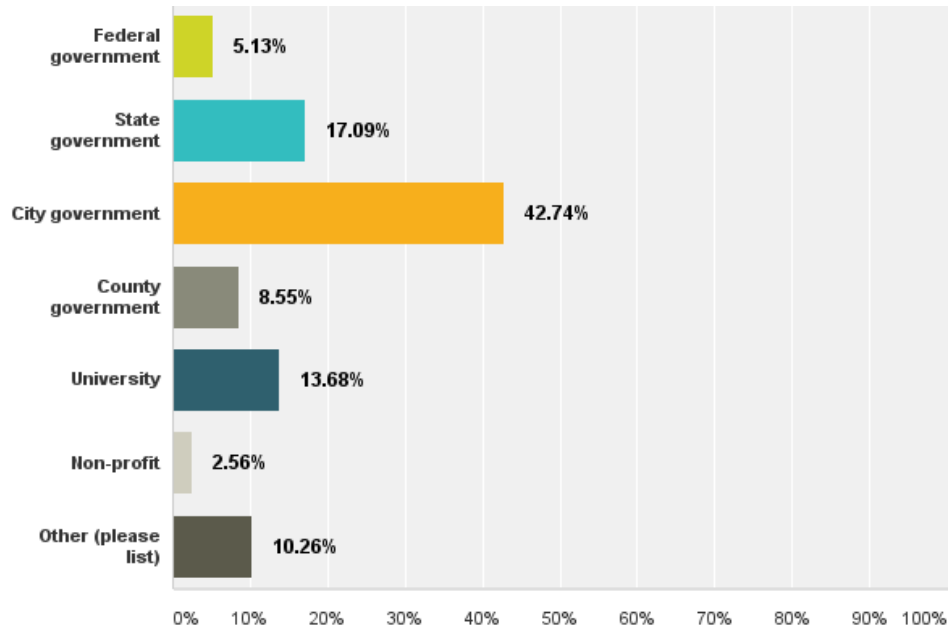
Funding is another significant challenge, particularly in the public sector. One in four respondents in that sector lists "a lack of resources to remove or treat public trees" as a major challenge, due in part to what many respondents say are general organizational funding difficulties. Untreated public trees that become infested with EAB can contribute to the infestation of other trees and can pose a public safety hazard once weakened or killed, making the lack of funding to remove or treat them a matter of public concern.

Despite these and other challenges outlined in this report, about 66% of all survey respondents are planning EAB-related activities or events in 2015. To help the EAB Response Team and others to efficiently and effectively respond to the pest, the respondents to this survey have provided their ideas on ideal planting strategies, high-ROI outreach tactics, and general best practices related to EAB response, along with their other survey responses. Those responses and insights are presented within these pages.

# Q: What is your primary role? (Respondent demographics)

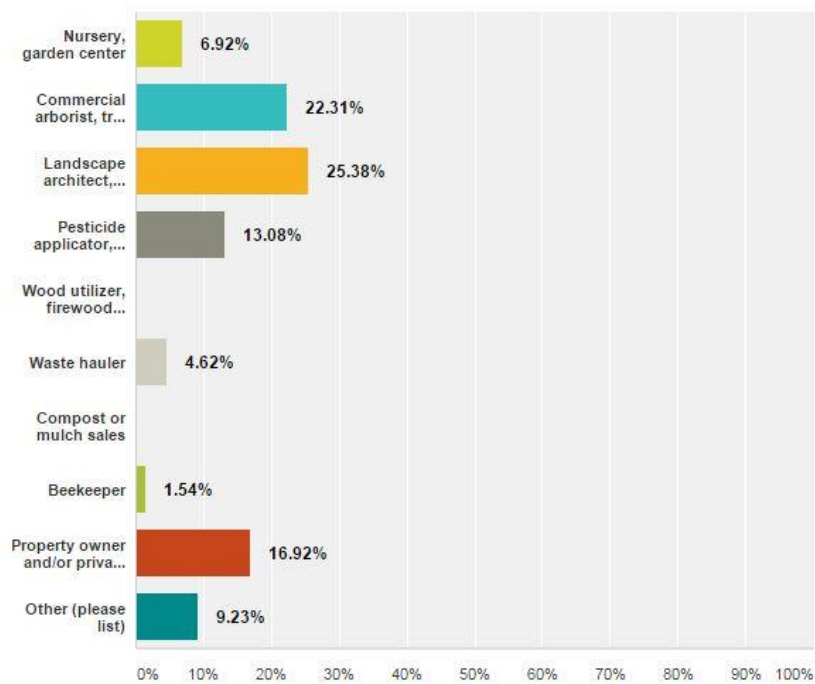
## Public Sector

Respondents representing city and state government made up more than half of all respondents to the public sector survey. University respondents were also well-represented, accounting for 13.7%.



## Private Sector

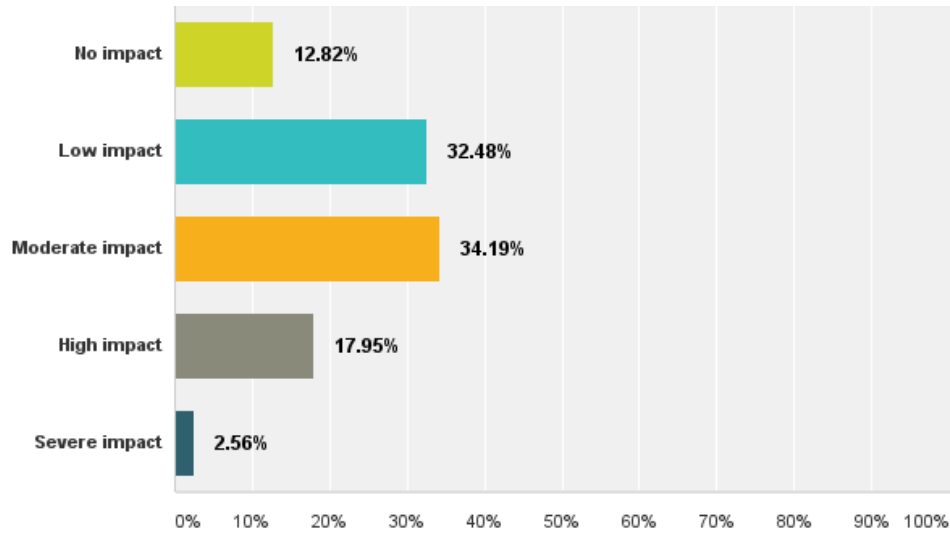
Landscapers and commercial tree care professionals comprised nearly half (47.7%) of respondents to the private sector survey. Property owners/private individuals made up another 16.9% of respondents.



# Q: What level of impact has the arrival of emerald ash borer (EAB) in Colorado had on you/your organization?

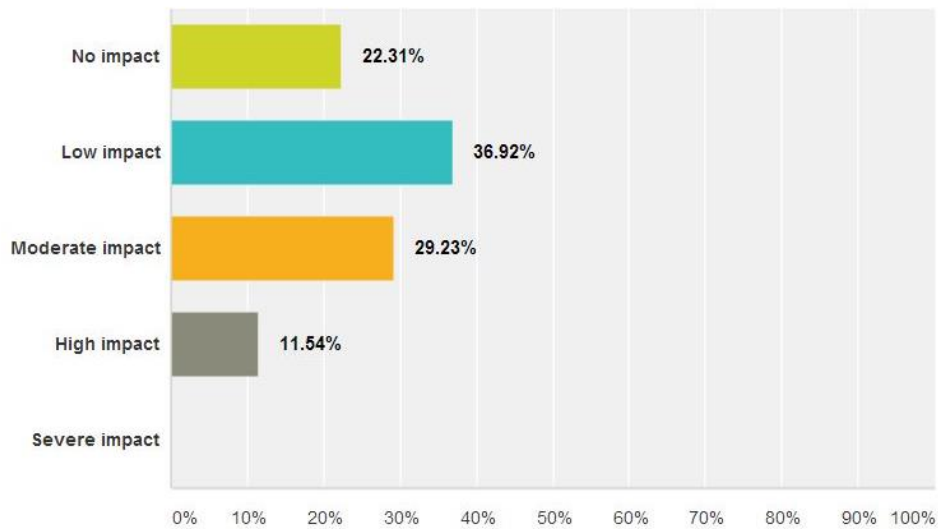
## Public Sector

Only 2.6% of respondents indicated that EAB has had a severe impact on their organization, but another 18% said the impact was high – much higher than in the private sector. More than half (66.7%) of respondents said the impact has been either moderate or low, and 12.8% of respondents said they had experienced no impact.



## Private Sector

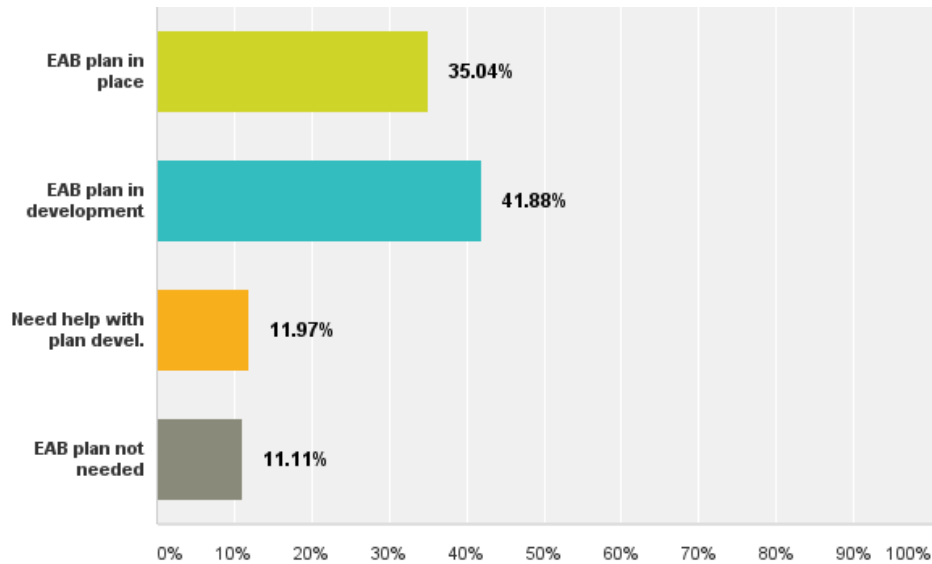
No respondents in this sector indicated having experienced a severe impact from EAB, and 11.5% percent (a level 6.5 percentage points lower than in the public sector) indicated having experienced a high level of impact. More than half (59.2%) said the impact has been either low or absent, a marked shift from the public sector.



# Q: Do you currently have an EAB management plan to guide management or education efforts?

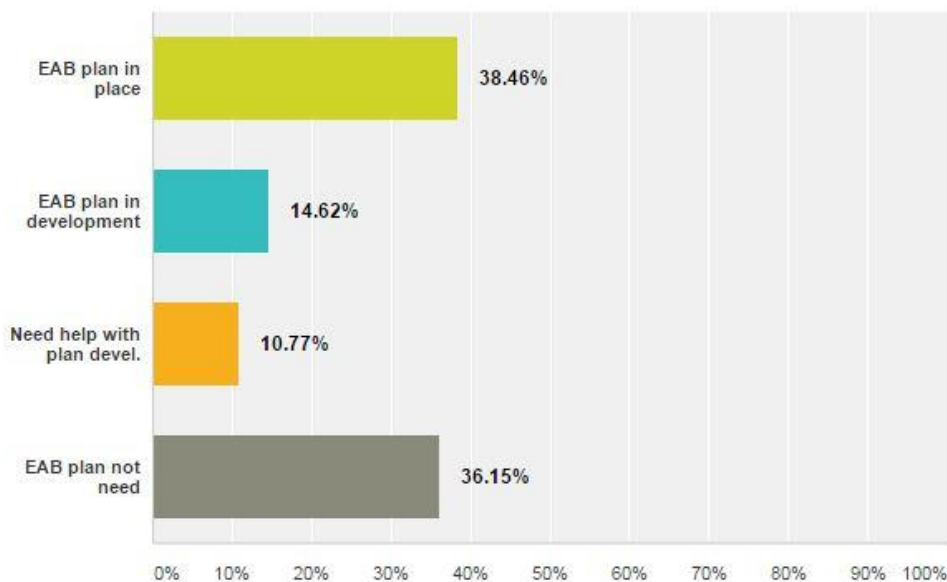
## Public Sector

76.9% of respondents reported having an EAB management plan in place or being in the process of developing a plan. 12% of respondents indicated needing help with developing an EAB management plan.



## Private Sector

53.1% of respondents reported having an EAB management plan in place or being in the process of developing a plan. 10.8% of respondents indicated needing help with developing an EAB management plan. Private sector respondents also were asked about their awareness regarding the current wood quarantine in Boulder County; 83.9 said they were well aware of the current rules and boundary, 2.3% were unaware, and 13.9% indicated being aware of the quarantine but desiring more information.

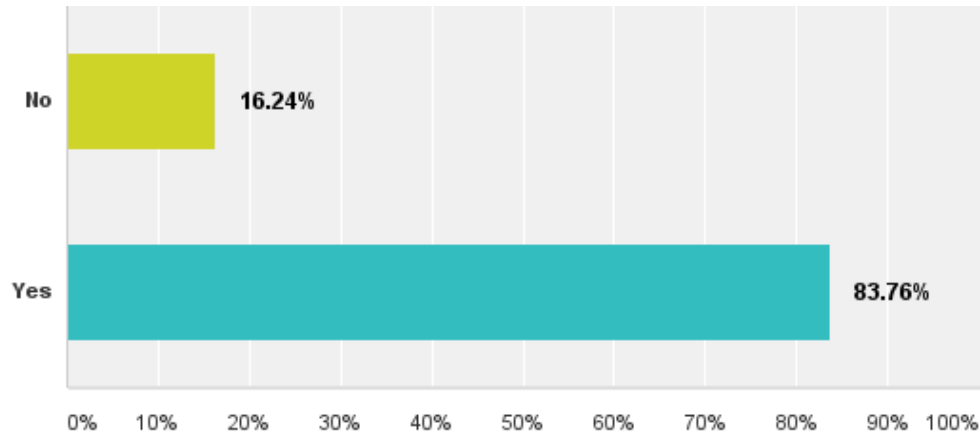




## Q: Have you already devoted some resources (time or money) toward preparing for or responding to EAB?

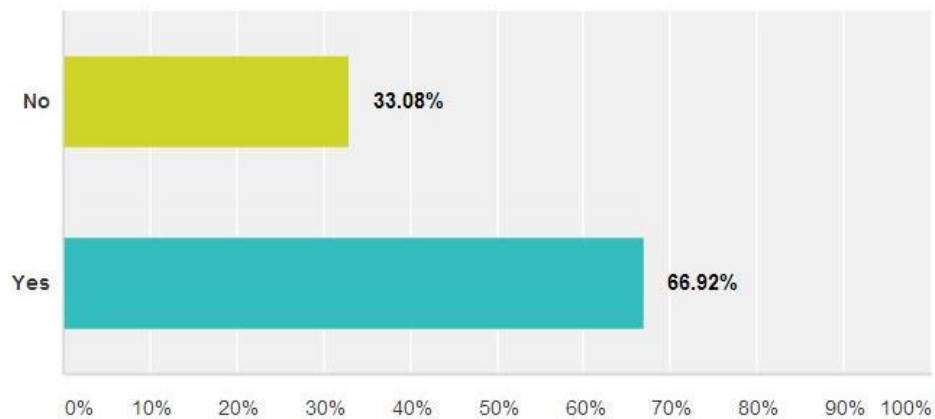
### Public Sector

The 19 respondents who answered “No” to this question were automatically directed past the “EAB Education, Outreach, and Detection” section of the survey, picking up at the “Looking Forward” section (which covered EAB-related challenges and future EAB-related events).



### Private Sector

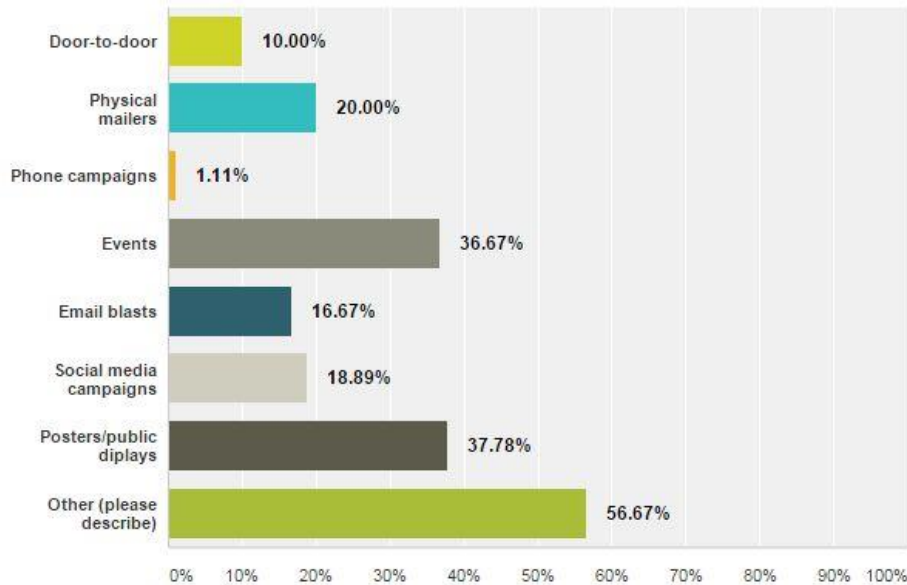
The 43 respondents who answered “No” to this question were automatically directed past the “EAB Education, Outreach, and Detection” section of the survey, picking up at the “Looking Forward” section (which covered EAB-related challenges and future EAB-related events).



# Q: Please indicate any/all types of EAB marketing or outreach you have performed or taken part in.

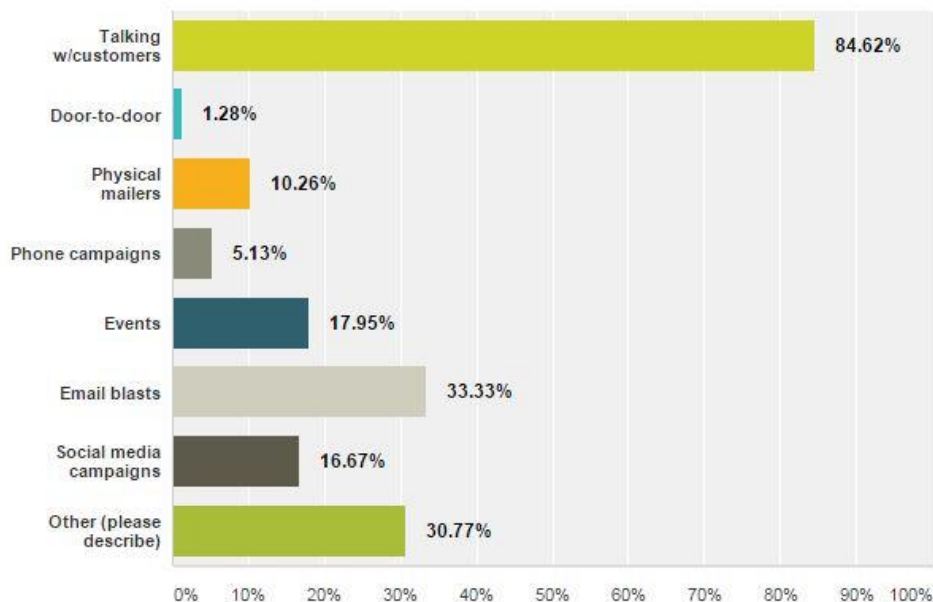
## Public Sector

Posters/public displays (37.8%), events (36.7%), and physical mailers (20%) were the most common activities respondents reported taking part in. Many respondents also indicated participating in types of outreach not listed among standard responses. Common responses in the “Other” category included meetings/presentations (9 respondents or 10%), website content (8, 8.9%), newsletters (6, 6.7%) and press releases (5, 5.6%).



## Private Sector

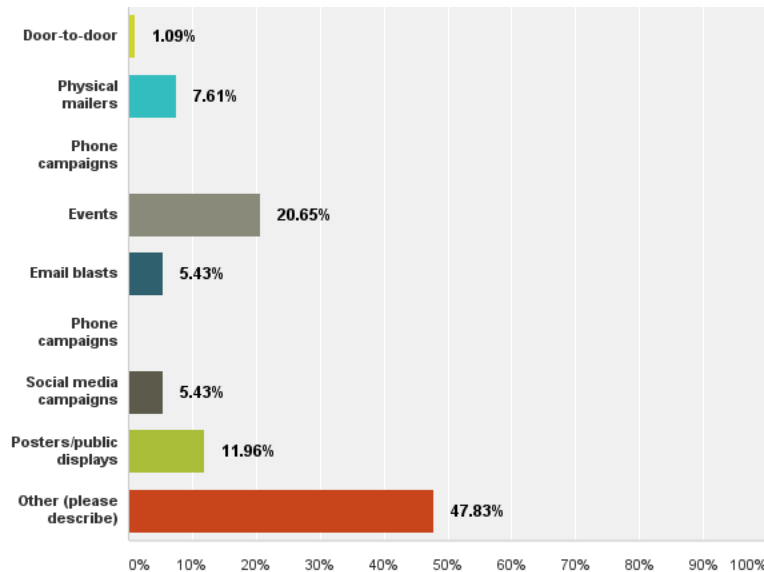
Talking with existing customers during non-EAB services was by far the most common marketing or outreach activity in this sector. Email blasts (33.3%), events (18%) and social media campaigns (16.7%) also were common. About a third indicated they had conducted various "Other" forms of outreach, including meetings/presentations, newsletters, unsolicited appraisals and talks with neighbors and friends.



# Q: Which one of those activities do you feel provided the greatest return on investment (ROI)?

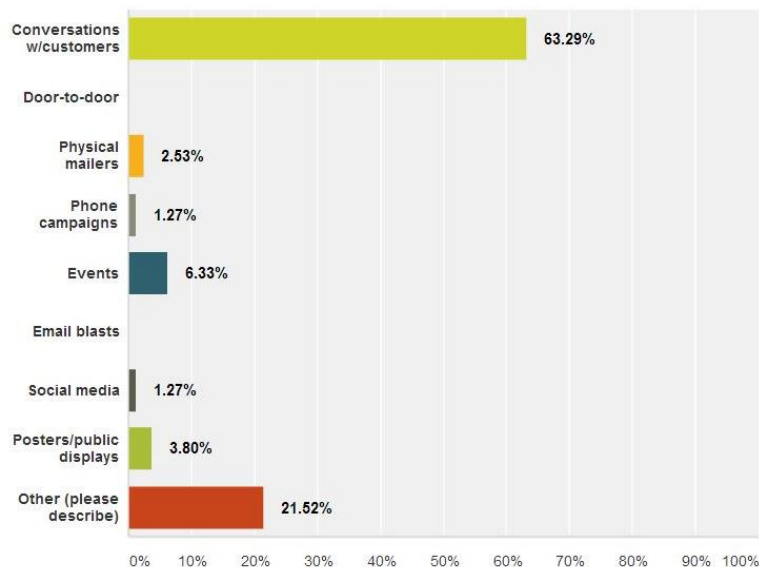
## Public Sector

Events were perceived as having the greatest ROI with 20.7% of respondents selecting this option – twice as much as any other category. Most respondents indicated that some "Other" activity had yielded the greatest return, however, with the most common responses being meetings/presentations (11 respondents or 12%) and newspaper articles (7, 7.6%). TV and radio coverage also were very popular among the few respondents reporting involvement in those activities.



## Private Sector

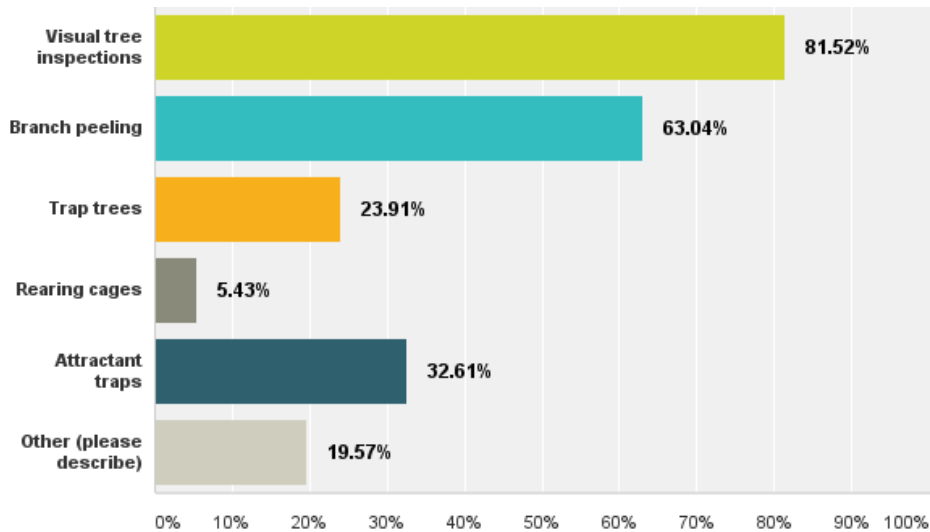
The majority (63.3%) of private-sector respondents listed "conversations with existing customers during non-EAB services" as their highest-ROI activity. Many "property owner/private citizen" respondents used the "Other" category to indicate that they had not conducted any formal outreach.



# Q: Please indicate any/all types of EAB detection activities that you have/your organization has taken part in.

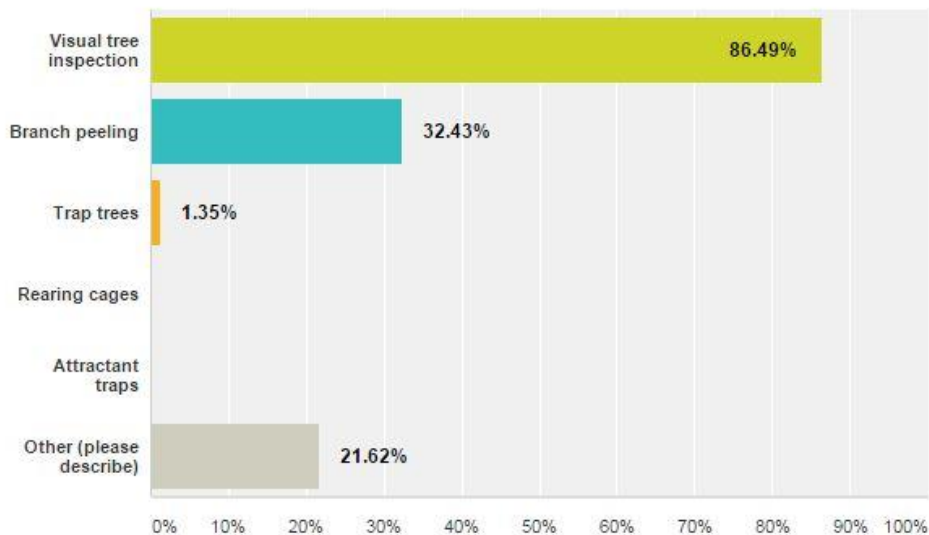
## Public Sector

EAB detection activities were very common in this sector, with 81.5% indicating having conducted visual tree inspections, 63% branch peelings and 32.6% the use of attractant traps. Several used the "Other" category to indicate participation in detection trainings and ash inventories. Several also used the category to indicate how many trees they had sampled, branches they had peeled or trap trees they had set.



## Private Sector

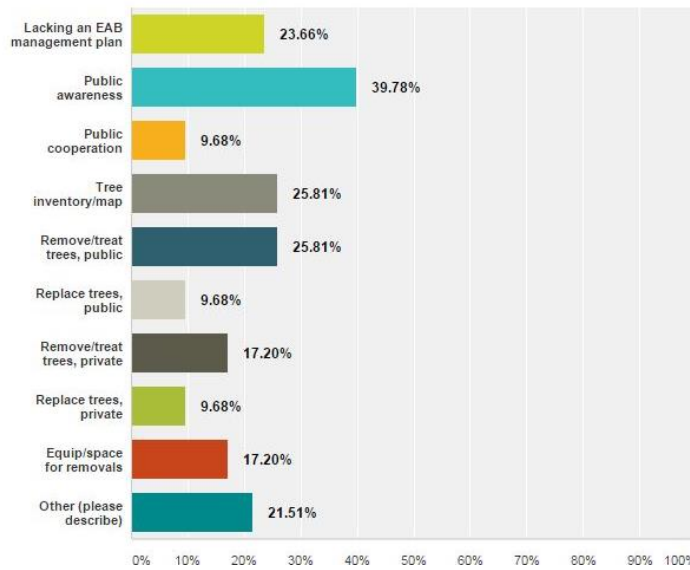
Visual tree inspections were even more common in this sector (86.5%), but branch peelings were significantly less common (at 32.4%). Trap trees were only used by 1.4% of respondents, and no respondents indicated using rearing cages or attractant traps, perhaps due to a lack of tree or trap access. Like public sector respondents, several private sector respondents also used the "Other" category to indicate participation in detection trainings or to indicate that they had not taken part in detection activities.



# Q: What are you or your organization’s two biggest obstacles to dealing with the threat of EAB?

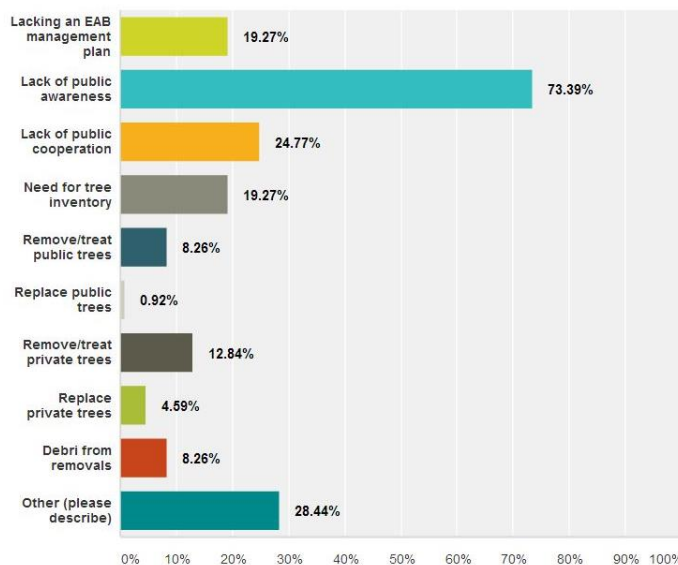
## Public Sector

39.8% included lack of public awareness among their top two EAB-related challenges, making it the most popular choice. Lacking an EAB management plan (23.7%), a need for better tree inventory/mapping (25.8%) and a lack of resources to remove or treat public trees (25.8%) were all popular answers in this sector. The majority of responses in the “Other” category centered on general organizational funding difficulties.



## Private Sector

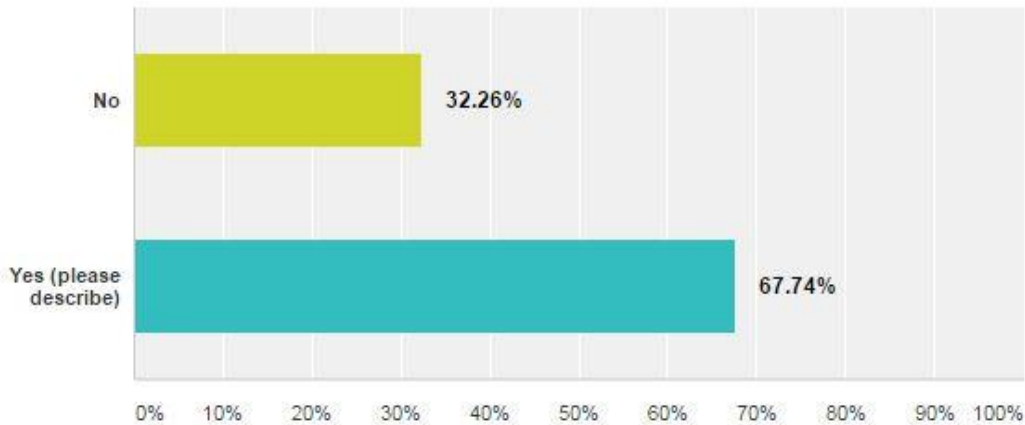
The overwhelming majority of respondents (73.4%) listed “lack of public awareness” as a top-two EAB-related challenge, perhaps indicative of this sector's greater daily involvement with the general public. Roughly one in five respondents also included lacking an EAB management plan, lack of public cooperation and the need for better tree inventory/mapping among their top two. “Other” common challenges included worries about bees, “scare tactics” used by other arborists, and customers outside of the infested area insisting on the need to treat.



## Q: Does your organization or do you have any EAB-related activities or events planned for 2015?

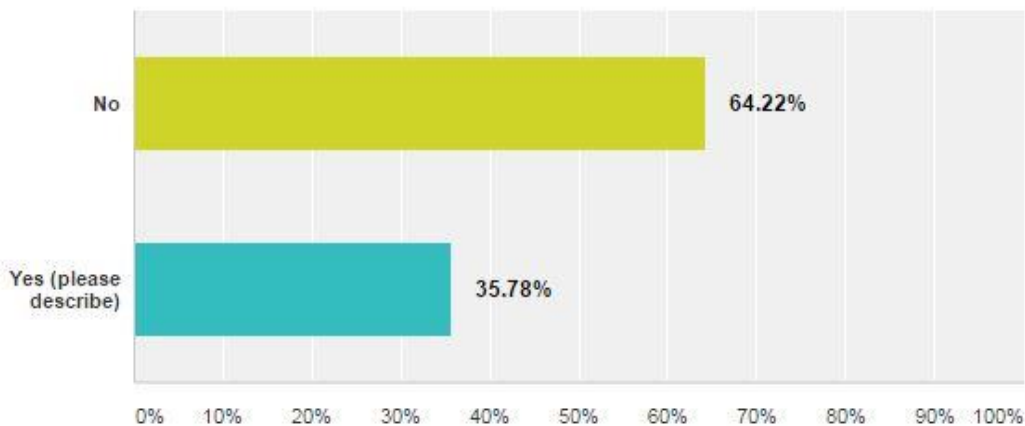
### Public Sector

Respondents with 2015 plans most commonly noted plans for internal and external education/outreach activities. The initiation or continuation of inventory work also was mentioned very commonly, as was the development of EAB management plans. Far fewer respondents noted removal and planting plans, suggesting that many organizations are in the beginning stages of addressing the EAB issue and feel that ash trees must first be identified and mapped before they can be monitored, removed or treated.



### Private Sector

Respondents in this sector have fewer EAB-related plans, perhaps because their customers are already taking the initiative in identifying ash and seeking more information. It is clear though that respondents in this sector will continue to work on the front lines of the EAB challenge regarding private trees, by fielding questions, helping homeowners to make decisions including monitor/remove/treat and informing them of the different risks and benefits of various pesticides. Inventory in its most formal sense was a less popular answer in this sector than it was for public sector respondents, but many respondents indicated plans to continue "scouting" for ash trees.



## **Q: Please summarize your organization's recommended planting strategy moving forward as it relates to ash replacement trees (timing, species, etc.).**

Responses in both sectors focused on the importance of diversity, site consideration and early under-planting. Pre-emptive removals/replacements also were popular.

### **Public Sector**

#### ***Response Highlights\****

"We have identified individuals for removal and treatment. Timing will depend on how soon EAB detection occurs outside Boulder."

"Replacement with trees known to do well along the Front Range, emphasizing diversification"

"Ash trees under 6" DBH and any ash trees in a declined state on public land will be removed and replaced with alternate species. Private landowners will be advised to do the same before the arrival of EAB."

"We will eliminate ash from our planting species and substitute with those of the Front Range Tree Recommendation List developed by the Colorado Tree Coalition and others."

"Removal of weak ash trees and replace as needed with diverse species."

"Under-planting ash that will not receive chemical treatment that are in fair to poor condition"

"Diversity. There is no one single replacement species for Ash."

"Allocation of approved budget funds to begin replacement of low-grade ash trees"

"A huge increase in species diversity, shadow planting untreated ash trees, remove ash when needed - no pre-emptive removals"

"Our goal is to increase species diversity overall so we are looking at many species to act as replacements. Oak, Honeylocust, linden, catalpa, Kentucky coffee tree, hackberry, a few elms...are all on the list."

"If you have ash trees, start planting replacement trees where appropriate as soon as possible unless you want to ultimately treat a tree indefinitely. That way you'll get a head start for if/when you lose you ash tree(s)."

"Replacement species for our District might include hackberry, DED resistant American elms, Kentucky coffeetree, bur oak, American sycamore."

"We will remove 2/3 of our Ash over the next 10 years, treat and preserve 1/3 and replant with a diverse species mix."

"Replacement trees will be planted in place of all removals."

"We will remove less healthy Ash trees over the next year or two. Realistically we will replace 1 in 4 trees we remove due to budget and labor issues."

"I am okay with fewer trees. Prairie is okay, beautiful and native. There were way too many Ash trees planted."

"I will be recommending the new proposed guidelines from ProGreen (<5% of same species)."

*\*The advice and opinions represented in this report are provided for informational purposes only and do not necessarily represent the opinions of the EAB Response Team or its affiliated organizations.*

## Private Sector

### *Response Highlights*

- "Relying on nurseries for alternatives and to look for new information as it becomes available"
- "We are coaching customers to remove and replace weak ashes with other species."
- "Any Ash trees on site that show signs or die will be replaced using non Ash species."
- "If budget restraints, 2-stage process of removal then future planting."
- "Our planting strategy is simple, a complete moratorium on ash trees. Our bidding/design/sales teams have completely stopped using ash trees as an option. We have turned towards more Catalpa, Ceris, Celtis, Acer, Gleditsia, Gymnocladus, Pyrus and Tilia to add to appeal, character and arboreal biodiversity to our designs."
- "We are planting a mix of deciduous trees as replacements."
- "Planting Western Hackberrys, oak, locust and other species in non-monoculture settings"
- "Plant other species instead of ash. Pretty simple."
- "Plant now so that if/when the Ash die, the new trees have had a few years to establish."
- "Suggesting a lot of Oak trees, and Turkish Filbert trees."
- "Species include catalpa, honey locust, kentucky coffee tree, hackberry, japanese pagoda tree, oaks, hawthorns"
- "Encourage customers to replace trees that are acclimated to each site specifically, to plant trees that are well suited to each site. To plant trees that are well within our hardiness zone."
- "Can't say a spp. because each site calls for a different tree."
- "I do not specify Fraxinus family trees in my landscape plans and haven't since EAB was discovered in Michigan. I will also not specify White Fringe Tree as I understand that it too is susceptible to EAB attack."
- "Planting smaller trees now to help reduce the impact of ash removals in the future."
- "Lindens, Kentucky coffee, smaller natives"
- Some neighbors plan to treat, some to try to save them and remove others"
- "HOA is currently planning to treat the currently healthy ash population when the EAB arrive."
- "Selecting the right tree for the location"
- "Spring/fall planting of white oak group and select red oak group."
- "I would suggest people enjoy their Ash tree while they can. Not to invest into chemical controls (unless the true value of the tree justifies it). I would suggest planting trees which will tolerate our soil and consider other factors after that."
- "I have one ash on my boulevard and if it becomes a problem in my area I hope to be given permission to remove it and replace the tree with something else. I will not spray or inject."
- "Recommending Kentucky Coffeetree, hazlenut, maples, locust instead of ash"



# **Q: What general best practices related to preparing for EAB or actively responding to it have you learned that you would like to share?**

## **Public Sector**

### ***Response Highlights***

"Partnerships are increasingly necessary to address the costs associated with invasive pests"

"Create a replacement plan for the ash trees"

"More education is needed to avoid homeowners being taken advantage of by some tree service companies who want to treat NOW."

"Prepare now for EAB. Have an inventory of trees to chemically treat and those to let die. Prepare office staff for huge influx of phone calls from concerned homeowners."

"Be proactive. The more we do now, the less of an impact this will have when it reaches our area."

"Communicate early and often. Involve stake-holders, City Council, tree board and key departments in the development of the EAB Response Plan."

"Inventorying all Ash trees is first step. Deciding which trees should be preemptively removed now is proving to be more difficult."

"Roll with the punches and communicate, communicate, communicate."

"Figure out now if you have ash trees, and if you do, learn to recognize signs of EAB infestation. Decide now whether you will want to treat, remove or replace ash trees when EAB reaches your area. And DON'T MOVE FIREWOOD!"

"Know what you have and where – inventory"

"It is not here yet, but could be at any time. Just takes one piece of firewood."

"Based on my interactions with local, state, and federal forest health experts, some of the best practices emerging are: accurate inventories to support proactive planning, strategic treatment and/or removals, and utilization strategies and business development."

"Get all Ash trees trimmed so that we know what condition they are in before EAB shows up so that we can make educated response to whether we treat or remove the tree."

"Not a big fan of pretreating trees with insecticides."

"Working with HOA groups has been great - educate, get community involvement."

"Request cooperation from the public regarding branch sampling"

"Door to door education is very powerful when it is possible."

"Key to success is convincing decision makers and administrators of the potential threat of EAB"

"Update the tree inventory, provide education to people who work on trees (they'll probably be the first to detect in new areas), provide education to tree owners, start an aggressive planting program, consider removing ash that are in poor condition."

## Private Sector

### *Response Highlights*

"We stress winter watering to keep all plant material safe from winter stressors."

"Weak tree evaluation and a plan to remove those trees"

"The public awareness now is not significant enough for people to react/respond. If there was more education as to the ultimate devastation EAB can create as it did for so many communities in the east, it could be beneficial to achieve a more pro-active approach locally."

"Performed GIS mapping of trees including sizes, visual inspection, and general health"

"Only attempting to preventatively treat for trees that are large enough, and healthy enough, to justify the saving them. Using systemic merit injections and increased frequency of Ash bore treatments."

"If you can use an organic bio-insecticide instead of a bee killing product, you should."

"Be honest. People and organizations love their trees. They appreciate the advice and information."

"People do not pay attention or care until something actively affects them and is staring them in the face. They have to see it to believe it. You need more photos in your outreach of places back east with dead trees."

"Personal sense is that if EAB is confirmed in a tree, it's just a matter of time before the tree is beyond saving. Recently attended a seminar in Virginia where I visited at length with Dr. Daniel Potter U. of Ky. entomology dept. He feels that commercial injection of Tree-age is the best chemical treatment, but that it's still a stop-gap measure."

"Need to educate more of the tree companies and landowners so they won't be taken by companies that want to sell products whether you have EAB or not."

"I believe direct trunk injections are the best means of protection."

"HOA has inventoried and measured the diameter of our ash trees, in order to make an estimate of the expense that will need to be budgeted to protect them"

"Evaluate each tree as an individual."

"Reducing harm to pollinators"

"Remain informed and up-to-date on where it's active and where it's moving."

"Awareness, early preparation for funds/plans/yarding sites, have an inventory"

# Supplementary Information - CO-TreeView, Colorado's Community Tree Map

CO-TreeView, accessible at [cotreeview.com](http://cotreeview.com), is a web-based tree inventory and mapping tool used by Colorado foresters and arborists to record and visualize the location, species and condition of the trees that make up Colorado's urban forests. This tool, which allows users to view tree and planting site data at a variety of scales, enables proactive, data-driven forest management planning, grant solicitation and public outreach in support of the conservation and enhancement of the state's community forests.

While designed for utility in a broad range of applications, the CO-TreeView tool was created in response to the discovery of emerald ash borer (EAB) in Boulder in late 2013. The Colorado Tree Coalition (CTC), which funded the development of the tool, recognized the potential value in having a statewide system to house, aggregate and display tree inventory data from diverse sources, encouraging Colorado communities to work together to build and protect urban forests.

The 2015 EAB Community Update Survey gauged public awareness of the tool's development just prior to the tool's February 2015 release. 66.7% of public sector respondents were aware that the tool was in development and would soon be available, compared to only 28.9% of private-sector respondents, suggesting that additional public outreach may be required to achieve widespread usage of the tool.

Three out of four (74.4) respondents across surveys reported that they would be willing to upload an existing tree inventory into the tool. Private sector respondents were less likely to be willing, possibly because of the difficulties involved in collecting tree inventory information on private property or because of their unwillingness to share client information.

Survey-takers were also asked about which optional enhancements to the current CO-TreeView basic functionality they would find most useful given if additional funding for the tool's development were to be obtained; the results of that question are shown on the next page.

**Registered CO-TreeView users can quickly and easily add tree inventory information and create customized, downloadable charts and maps. Request your CO-TreeView account today to begin using this free tool.**

**For more information on CO-TreeView, including detailed FAQs, click the "Overview/Intro" link from the CO-TreeView "Getting Started" window (from the [CO-TreeView homepage](#)).**

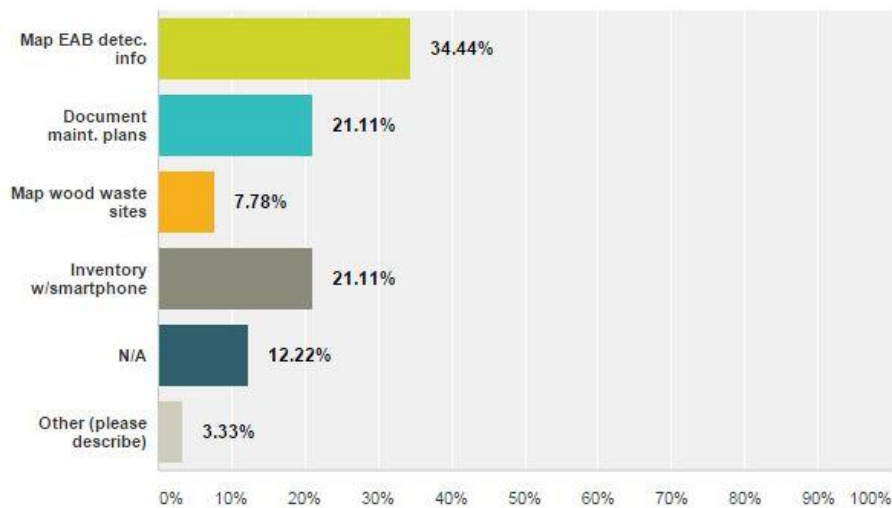
**For help using CO-TreeView's inventory and mapping tools, click the "Help and Tutorials" link.**

## Q: Which one of the following optional enhancements to CO-TreeView would you find most useful?

Choices included the ability to map EAB detection information for individual trees (sampled, not sampled, detected, etc.); the ability to document maintenance plans for individual trees (treat, remove, underplant, etc.); the ability to map woodwaste, marshal yard and disposal sites; the ability to add individual tree inventory data straight from a smartphone (rather than uploading data for multiple trees in a shapefile from a PC); and N/A (I don't think this tool applies to me).

### Public Sector

The ability to map EAB detection information was the clear winner among public sector respondents (34.4%). The ability to document individual tree maintenance plans and the ability to add inventory data via smartphone also were popular answers, each garnering 21.1% of responses.



### Private Sector

The ability to map EAB detection information was even more popular with the private sector group, at 39.4% of respondents. The second-most-popular response was the ability to conduct a smartphone-based inventory. Interesting answers in the "Other" category included "locations and risk of standing, dead trees" and "anything that would help our customers understand their current risk of EAB on their property."

