

**Seizing Opportunity from Crisis:
Columbus and the Emerald Ash Borer**

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The effects of the Emerald Ash Borer (EAB) crisis are devastating and well documented. While great efforts are being made to counteract and slow the effects of the infestation, the loss of the ash canopy is taking a financial and environmental toll nationally, especially in urban areas. A haunting aspect is that EAB is only one of many exotic species introductions gone awry. Around the globe, large scale canopy loss is underway caused by a variety of insects, diseases, competitor plants and even climate change. Arborists and Urban Forest Managers find themselves on the front line of these canopy crises with the primary responsibility of mitigating the hazards associated with dead and declining trees.

Effective urban forest programs should focus on two concepts when dealing with threats to the canopy: 1). How best to address the current canopy crisis and 2). How to better prepare for the next. The former requires logistics, coordination and communication with success largely dependent upon the lead time to the crisis and the amount of resources allocated to it. The latter is a strategy used to recognize opportunities within the current crisis and to use them to attain goals that better prepare programs for future threats.

The Current Crisis:

Large scale ash mortality began in 2010-11 in the northern sections of Columbus. In 2011, recognizing that EAB posed a significant risk, City leaders, Columbus Recreation and Parks Administration and Columbus City Forestry committed to an 11 year/ \$10 million project approach to address the EAB crisis. The goal of the EAB project is to empower Columbus City Forestry staff to properly address the EAB crisis in the most productive and cost efficient manner possible. Because of the advanced nature of the infestation in Columbus at the time of project implementation, the EAB project has a dual focus of Minimizing risk to public safety by safely and efficiently removing affected ash trees AND committing to a one for one replacement of the lost trees with a diverse palette of hardy, canopy trees. The removal of infested ash trees and the replanting of new trees is accomplished by a combined public and private effort comprised of Forestry maintenance, nursery and planting staff and contracted vendors. The basis of the project plan is as follows: EAB project specific staff identify, inventory and map ash trees; the trees are then organized by their DBH) and assigned via work order to either In-house staff (DBH <15") or to contract (DBH>15"); the trees are removed and the stumps are ground; new trees are planted approximately 12-18 months after the removal takes place. In most cases, it can be up to 24 months from the time an ash tree is marked for removal to a new tree being planted. To date, the EAB Project has managed to remove 15,402 of the estimated 30,000 public ash trees. The planting efforts have seen over 10,000 trees replaced to date.

Preparing for the Next Crisis:

It became clear early on in the EAB project, that four areas of opportunity materialized to advance the CRPD Forestry program and improve Columbus' tree canopy as a whole.

These areas of opportunity are:

- **Expansion** – Managed by Columbus City Forestry, The 11 year EAB project totaling \$10 Million has been used to hire project management and support staff, procure much needed equipment and supplies, and hire contractors to supplement large tree removal, stump grinding and canopy replacement projects. The influx of resources and responsibility has breathed ‘new life’ into the Forestry Section in the form of increased crew morale, greater efficiencies and productivity, and a development of proactive management strategies.
- **GIS Integration** – a portion of the EAB resources were used to develop a Forestry GIS and data management system. To accurately identify, inventory and geo-locate ash trees in Columbus, the existing street tree inventory was converted to and spatially edited in a GIS platform. This data is being implemented to assign work, create efficient inspection routing for staff and forecast areas of impact city wide. A complete GIS based tree inventory and analysis of the City’s 250+ developed parks is underway, creating a realistic representation of not only the EAB impact but also the current state of each park’s canopy. This baseline information is used in planning the replanting effort, with a primary emphasis on diversity and increasing canopy cover, and communicating maintenance needs to CRPD Administration. Parallel with this effort, is the implementation of a new work order system that is asset (individual tree) based rather than address based. The existence of Forestry GIS has allowed for a seamless transition to the new system.
- **Partnerships with Momentum** – Recognizing partnerships that can assist in accomplishing Forestry goals is key to developing programs ready for future challenges. It would be shortsighted to think of the EAB crisis as just a tree removal project. In fact, City Forestry refers to the EAB project as a canopy replacement project. It can be argued that diversity and available space (above and below ground) are now the two most important characteristics when considering an urban forest canopy. The large scale canopy loss caused by EAB and related factors has generated concern and discussion in municipal sustainability networks worldwide. Aligning urban forest canopy concerns with current municipal sustainability efforts has proven successful. Mayor Michael Coleman considers Columbus’ municipal sustainability of primary importance, and has led a robust sustainability effort in Central Ohio. Recognizing canopy loss as a major threat to Columbus’ livability, The Green Space Working Group of the Mayor’s Green Team developed a recommendation paper, to Columbus’ Elected Officials and Administration, focused on the importance of tree preservation and increased canopy cover throughout the City. These efforts, in turn, have leveraged dollars to currently fund an Urban Tree Canopy Analysis for Columbus. Results from this analysis will be used to determine a realistic and appropriate canopy goal for the City and a plan with a timeline to achieve that goal. These efforts are attracting various Federal, State and Local public and private partners who are interested in collaboration.
- **Marketing** – With a crisis like Emerald Ash Borer, comes attention. It is at these moments that accomplishments, limitations and forecasts must be communicated to Elected Officials, Administration and the citizenry as a whole to leverage solutions. These solutions need to focus on the current situation and becoming better prepared for the next. Examples

include, calculating the environmental benefits lost to EAB via iTree and using the data in monthly staff reports, progress meetings and publishing an annual EAB Progress Report with copies made available to decision makers citywide. Currently in development is a web based interactive GIS map that documents the progress of our EAB efforts. Citizens can go to the map to answer questions on schedules from tree removals to replacement plantings. These advancements and data are especially useful for media questions, interviews, and inquiries of progress.

All of these opportunities are interrelated with the development of one strengthening the others. While these opportunities listed may be unique to Columbus, the important component is being able to recognize opportunities as they present themselves. Make no mistake; it is the challenging periods, the periods during crisis that will define our Urban Forest programs. Look for the Silver Lining, take advantage of opportunity and make decisions that build programs prepared for future challenges.