

Addressing Regional Tree Supply Challenges and Opportunities

A Rapid Assessment



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Executive Summary

- Market demand, driven by consumer trends and developer preferences, limits tree diversity and quality, while external market forces create unsustainable price competition.
- Supply chain logistics, including limited availability of seedlings and liners, hinder the production of diverse and locally-adapted tree species.
- The mismatch between multi-year tree growth cycles and short-term funding sources impedes long-term planning and market influence.
- A shortage of qualified technical staff and non-competitive pay scales in municipalities and non-profits undermines urban forestry efforts.
- Contract growing presents an opportunity to align grower production with end-user needs and reduce risks for nurseries producing new or uncommon species.
- Partnerships among growers, end-users, and institutions offer potential for improving tree availability and quality while expanding resources and expertise.
- Partnerships with non-profit organizations, local governments, or state nurseries may provide a viable solution for producing seedlings, liners, and finished trees of species that are not commercially viable in the nursery industry but are highly desirable in urban areas.
- Increased communication through industry events and the development of a centralized plant finder database could streamline tree-buying processes, though challenges in implementation remain.

Table of Contents

Executive Summary	2
Table of Contents	3
Background	4
Objective	4
Key Research Questions	4
Challenges Limiting Tree Diversity, Quality, and Abundance	5
Market Demand	5
Native Trees	5
Cultivars	6
Supply Chain Logistics	6
Seed and Liner Availability	6
Grant Cycles/Funding Timing	7
Staffing	7
Opportunities for Increasing Tree Diversity, Quality, and Abundance	8
Contract Growing	8
Partnerships	9
State Nurseries	9
Non-Profit Nurseries	9
Increased Communication	10
Increased Communication Among Industry Associations	10
Creation of a Centralized plant finder database	10
References	11
Appendix A: Methods	12
Participant Selection	12
Rapid Assessment Logistics	13
Transcript Analysis Process	13
Appendix B: Rapid Response Moderator Script and Questions	15
Appendix C: Rapid Assessment Meeting Summaries	19

Background

Experience, conversations with consumers, searches of inventory lists from nursery websites and databases, and prior research all point to nursery availability as a major limiting factor for purchasing and planting a diverse set of trees. It is worthwhile to understand why this is the case. One way to begin to address this overarching question is to interview large-scale growers and purchasers of trees throughout the region, to gain insights into why there is a limited palette of tree species available and planted, and how key players in this supply chain might approach expanding the supply of quality, diverse, climate-ready tree species for use in urban areas in the Chesapeake Bay Watershed

Objective

To understand the constraints and opportunities for creating a sustainable supply of quality, diverse, climate-ready tree species for use in urban areas in the Chesapeake Bay Watershed.

Key Research Questions

- What factors limit the quantity and quality of commercially-grown trees in the region?
- What opportunities exist to allow growers to produce enough climate-ready, underutilized trees to meet consumer demands?

Challenges Limiting Tree Diversity, Quality, and Abundance

Market Demand

Market demand is by far the main driving factor for the nursery growers we spoke to during our rapid assessment. While growers may have preferred species they would like to sell, consumer demand—driven by trends in the design and home garden markets—ultimately dictates their inventory. As one grower explained,

"We're obviously in the business for profit, so we are trying to predict what the market is gonna demand. We're at the mercy of the landscape architects, and the contractors and our customers."

Beyond staying current with market trends, growers noted that they tend to rely on tree species and size classes that have consistently sold well to minimize the financial risks associated with their planting decisions. While some clients, such as municipalities, have specific requirements for species, size, and quality, these buyers represent a smaller portion of the overall market. The market is primarily driven by large commercial developers, who are generally perceived as more focused on price and availability and less concerned with species diversity and tree quality. As a result, there is little incentive to cater to clients seeking change through stricter specifications and contracts.

The pressure from developers to produce low-cost trees is further exacerbated by external market forces. Growers noted that their industry is highly competitive, and they were contending with large-scale nursery production operations outside the Chesapeake Bay area. Additionally, nursery closures and liquidation sales flood the market with a steady supply of cheap tree stock, priced below what a viable company can sustainably produce. These closures are sometimes linked to financial hardship but may also result from the retirement of nursery owners. One grower noted that in the latter scenario, there is often no succession plan, which can limit the availability of high-quality trees in the local market.

Native Trees

Many respondents favored native tree species, with some stating they exclusively purchased or used native plants. This preference was reflected in certain jurisdictions, which pushed for a high percentage (90-100%) of native trees. An increasing demand for native species was also noted, particularly in retail garden businesses. However, the preference for natives was not universal nor absolute. Some respondents continued to use non-native species, recognizing their value when they were non-invasive and well-suited to urban site conditions. Challenges associated with relying solely on native species were also mentioned, including limited variety and sourcing difficulties. As one respondent noted,

“We have about a list of 12 trees that we plant, [laughs] and it seems to be because we're limiting ourselves to purely native trees.”

This is not to say that there is a lack of local tree diversity in the Chesapeake Bay area to draw from; rather, it reflects the omission of many native species in nursery production, especially in larger sizes.

Cultivars

Cultivars in nursery production offer several benefits, including improved drought tolerance, winter hardiness, production consistency, and specific traits desired by homeowners. They also provide disease resistance, as seen with American elm cultivars. However, their use raises concerns about limited genetic diversity due to cloning and potential overuse of the same genetic material. The market for cultivars is largely demand-driven, with commercial services often preferring them over straight species and rarely inquiring about seed sources or liner origins. As one respondent noted,

“It's demand driven, and maybe it'll change, but right now what's crossing my desk [are requests for] mostly 'Red Sunset' maples and 'October Glory' maples.

This preference creates a challenge for nurseries trying to balance ecological considerations, as straight species are preferred for restoration projects and genetic diversity is important for overall ecosystem health. The production of cultivars also faces challenges in urban environments, where nurseries must balance the availability of disease-resistant varieties with site constraints.

Supply Chain Logistics

Seed and Liner Availability

Growers in our focus group highlighted a challenge they face when trying to grow new species: the availability and sourcing of seedlings and nursery liners. Many nurseries don't propagate their own trees from seeds or cuttings, instead relying on purchasing small trees, called liners, which they grow to a salable size. A significant portion of these liners comes from a relatively small group of large-scale producers in the Western United States, which can lead to supply bottlenecks. One grower mentioned that he had been trying to purchase 400 liners of a preferred species for five years, but was only able to obtain a tenth of his request each year. Additionally, the centralization of liner production makes it difficult to source native species with local provenance, which is often desired by purchasers and even required by some local municipal ordinances.

Grant Cycles/Funding Timing

Another challenge that prevents many tree purchases from shaping the market is the fundamental mismatch between the multi-year growth cycle of trees and the shorter-term nature of most funding sources. Trees require many years to grow from seedlings to a size suitable for planting, particularly when targeting the larger caliper stock favored in urban environments. This natural timeline is poorly aligned with the annual or short-term cycles of most funding mechanisms. Local government budgets often fluctuate yearly, and planting grants—one of the main funding sources for state and federal initiatives—typically operate on similar short cycles. Even longer-term grants are generally limited to three years, which is insufficient time to influence nursery planting decisions.

Furthermore, the uncertainty of future funding from grants and budgets makes it difficult to commit to long-term tree production contracts or plan for large-scale, multi-year planting initiatives. When organizations do secure grants, they often face pressure to act quickly to meet short deadlines, which may not align with optimal planting seasons or tree availability. Bureaucratic processes can further complicate matters, delaying fund distribution and making it challenging to meet seasonal planting windows. The inconsistent nature of grant funding also limits organizations' ability to leverage their purchasing power to influence tree nursery production. Without guaranteed future funds, it's risky to push for changes in tree availability or species diversity, as there is no assurance of resources for future purchases. This situation creates a cycle where the short-term focus of funding sources limits long-term impact on the tree market.

Staffing

One challenge that hadn't been raised in our previous regional and national focus groups (Koeser et al., 2022, Hibert et al., 2023) is the shortage of qualified technical staff who understand the importance of tree quality and species diversity. This staffing issue affects various aspects of urban tree initiatives, from project planning to long-term care. Municipalities and non-profit organizations often struggle to build and maintain the internal capacity needed for effective tree management. The problem is worsened by non-competitive pay scales, making it difficult to attract and retain skilled professionals. Participants emphasized that these technical positions are crucial for ensuring the survival of newly planted trees. As one respondent stated,

“With technical expertise. I guess I really wanted to hit home that those positions need to be highly valued.”

Without knowledgeable personnel, the success and sustainability of urban forestry efforts are significantly undermined.

Opportunities for Increasing Tree Diversity, Quality, and Abundance

Contract Growing

Contract growing was the most discussed potential solution to address tree availability issues in urban forestry, offering benefits such as better alignment between grower production and end-user needs, securing specific species and qualities, and potential cost savings. Importantly, it also reduces the risk for growers when producing new species or trees to specific requirements, a factor viewed positively by nursery operators. As one grower explained,

"What would be most helpful for growers is more of a partnership with end users to find out what's in the pipeline, what they're going to need. Ideally, even some sort of contract grow situation where sizes, specs, and varieties are listed. Otherwise, as growers, we're taking the risk of trying to grow something we think will sell."

Some organizations have successfully implemented shorter-term contract grows for smaller materials, finding them particularly useful for larger projects, those funded in advance, and for sourcing hard-to-find or native species.

However, contract growing also presents challenges, especially for longer-term contracts needed for larger trees. Many participants expressed concerns about the 5 to 7 year timeframe required for large urban trees, noting that much could change during this period, including the possibility of business closures. As one grower noted,

"From a grower's perspective, it scares me a little, committing to grow these trees. And then something happens—weather, nature, [pests], or whatever."

Other challenges include short grant windows, funding uncertainties, and the long growth cycle of trees. Despite these concerns, both growers and buyers recognize the potential of contract growing to improve tree availability and quality while reducing financial risks for growers. However, those who have experimented with contract growing tend to focus on shorter-term contracts for smaller plant material, reflecting a hesitancy to commit to extended time frames. All parties acknowledge the need for stable, long-term funding and careful planning to make such arrangements viable and beneficial, particularly for larger urban trees.

Partnerships

Partnerships with growers have emerged as a key strategy for improving tree availability and quality in urban forestry projects. Participants emphasized the importance of fostering closer relationships between end-users and nurseries to better align production with demand. These partnerships can take various forms, ranging from informal arrangements where urban foresters provide advance notice of their needs to more structured contract growing agreements. Some organizations have successfully collaborated with local nurseries by placing orders well in advance to ensure availability. Additionally, participants mentioned the benefits of working together or using brokers to secure a representative at the nursery to tag trees that met their quality requirements. Building strong relationships with growers was seen as essential to overcoming challenges, with one participant noting,

"Relationships help you smooth all these little bumps out."

Partnerships with industry, NGOs, and government entities were also highlighted as valuable resources for urban forestry initiatives. Collaborations with universities, botanical gardens, zoos, and local government agencies were cited as effective ways to expand resources and expertise. Respondents mentioned discussions with local universities to propagate desired species. One respondent, who worked for a municipality, noted that they provided temporary storage for local groups to hold stock after delivery and before planting.

State Nurseries

As noted earlier in our challenges section, many nurseries do not propagate seeds or cuttings in-house. Instead, they rely on companies specializing in seedling or liner production to source plant materials. Respondents noted that some state nurseries have been underfunded recently. They believe there is an opportunity to reinvest in these nurseries to produce seedlings and liners for desirable tree species that are currently seen as unprofitable by nurseries. Moreover, these nurseries could produce local provenances of species with broad ranges and provide greater detail about seed sources than is currently available for much commercial nursery stock.

Non-Profit Nurseries

Several participants shared their experiences or interest in developing small-scale, internal nursery capacities for hard-to-find tree species. These efforts typically involve cultivating smaller-sized stock, ranging from propagation gardens to nurseries producing a few thousand trees annually. Motivations include growing rare species, reforesting former agricultural lands, and supporting local conservation efforts. Methods vary, from starting plants from seeds

(sometimes collected locally) to purchasing and raising liner stock. There was also interest in investing in state tree nurseries as a means of producing less marketable species. This approach allows organizations to balance self-grown stock with purchases from established nurseries, providing greater control over species selection and local adaptation.

Increased Communication

Increased Communication Among Industry Associations

Many respondents emphasized the importance of increased communication between tree producers and purchasers to address the current availability of nursery trees. Trade shows and events—particularly the Mid-Atlantic Nursery Trade Show (MANTS)—were identified as crucial networking opportunities. MANTS was frequently mentioned as a premier event for both growers and buyers, with one participant even describing it as "heaven on earth" for industry connections. These shows provide valuable platforms for face-to-face meetings, relationship-building, and staying informed about market demands.

State-level organizations were also highlighted as important resources. Participants cited various state nursery and landscape associations, such as the Pennsylvania Landscape Nurserymen's Association and the Maryland Nursery and Greenhouse Association, as key players in addressing industry issues and facilitating connections within their respective states. Overall, these professional organizations and events were portrayed as essential for networking, assessing market needs, and fostering relationships between producers and purchasers in the tree industry. While designers, arborists, and urban foresters have numerous opportunities for networking and continuing education through their own organizations, efforts should be made to move beyond these meetings when addressing issues that cut across green industry sectors.

Creation of a Centralized plant finder database

Several participants expressed a need for a centralized database of nursery trees for sale, highlighting the current challenges in finding up-to-date information on tree availability. They noted that while some resources claim to offer this service, the constantly changing inventory of nurseries makes it difficult to maintain accurate, real-time information. Participants envisioned a comprehensive system that would allow users to search for available trees within a specific radius, including details on sizes and quantities. This database was seen as a potential solution to streamline the tree-buying process and improve efficiency for both buyers and sellers. As one purchaser noted,

“...it'd be great to have some central database where you can see...what is available from the nurseries...Who has what? Of what size? It would make buying trees a lot easier”

However, the idea of a centralized database raised concerns among some nursery owners, particularly smaller operations. They expressed anxiety about the frequency of updates required to keep such a system current, noting that many nurseries only update their inventories a few times a year. Some participants recalled past attempts to create national directories, suggesting that modern technology could ease implementation. That said, nurseries vary in their willingness to embrace technology—some host online ordering systems and post on existing commercial plant-finder apps, while others still rely on traditional sales methods. The variation in how inventory data is recorded, stored, and updated poses significant challenges to a unified plant-finding effort.

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Appendix A: Methods

Participant Selection

For this rapid assessment, we conducted a series of focus groups that included urban tree producers and purchasers from across the Chesapeake Bay watershed (Fig 1). Participants were selected to ensure representation from major stakeholder groups involved in the tree selection and planting process. These stakeholders included wholesale nursery growers who produce field, bare root, or container trees, landscape architects, designers, developers, and planners responsible for specifying trees for commercial developments, and municipal foresters or arborists who select trees for public plantings and influence private plantings. Additionally, industry associations, representing non-profit groups involved in key green industries such as landscapers, growers, arborists, and urban foresters, were included, along with non-governmental organization (NGO) technical advisors and government agency professionals who are actively involved in tree-related work or advise those who do.

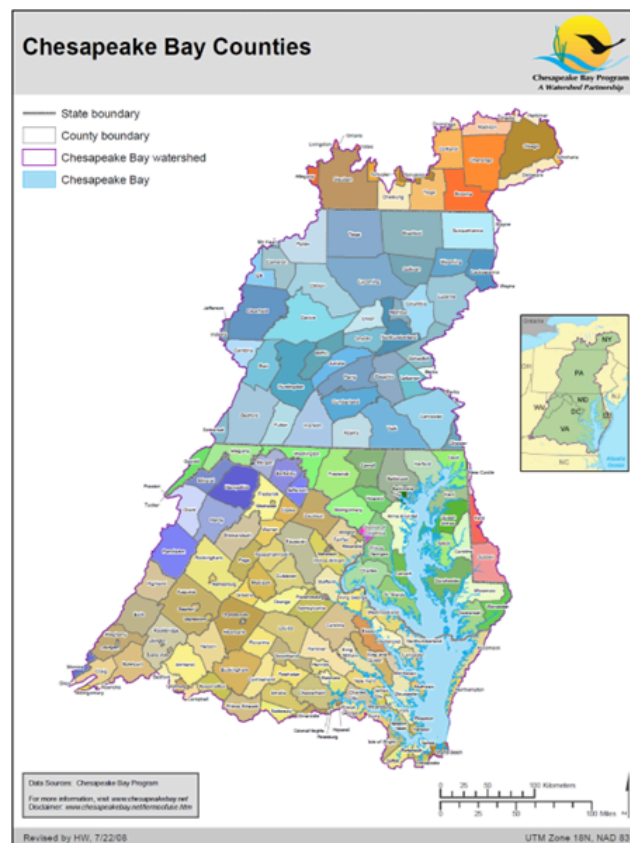


Figure 1. Map of Chesapeake Bay Watershed counties. Source: Chesapeake Bay Program, 2008.

Participants were chosen based on their professional involvement in the tree selection and planting process, with an emphasis on ensuring diversity across the key stakeholder categories. Recruitment efforts aimed to include representation from each of these categories to ensure a well-rounded perspective.

In an effort to secure a representative sample, we over-recruited by 20-50%. Participants were recruited from previous projects' stakeholders, regional organizations, and industry associations. Recommendations from partners, such as the Chesapeake Bay Trust (CBT), and colleagues were also used to identify suitable participants. When additional participants were required, "snowball sampling" was employed, allowing current participants to recommend others who might be interested.

Rapid Assessment Logistics

A total of three focus groups were held. Each meeting lasted approximately two hours, with subsequent meetings spaced two weeks apart to allow time for preliminary analysis and any necessary improvements. All meetings were conducted virtually using an online meeting service (Zoom), which facilitated recording and transcription. Zoom's chat feature also provided participants with the opportunity to write complex questions or responses. Each meeting group was composed of 5-9 participants, ensuring representation from growers (including those producing both field-grown and containerized trees), arborists or urban foresters, designers or developers, industry association representatives, and NGO or government agents.

Transcript Analysis Process

The transcripts were automatically downloaded from Zoom and cleaned through a multi-step process. Consecutive responses from the same speaker were consolidated into a single block of text, with the aid of AI, though manually reviewed for errors. During the first review, words emphasized by speakers that altered the meaning of their statements were italicized. Tags were inserted to indicate significant non-verbal actions, such as gestures or laughter, using square brackets. Verbal tics such as "um," "you know," and repeated words were removed without altering the original language or grammar. Fragmented or incomplete phrases that did not contribute meaning were also eliminated. Run-on sentences were broken up, and punctuation was added to improve readability. Instances of unintelligible speech were marked with a timestamp for reference.

The cleaned transcripts underwent an iterative review process, including a full listen-through to ensure accuracy. A second researcher independently reviewed the transcripts, adding comments and noting key responses that were particularly significant.

The finalized transcripts were uploaded into Quirkos for qualitative thematic analysis. A combination of inductive and deductive coding approaches was used. Deductive coding focused on responses that directly addressed the research questions, while inductive coding captured new themes that emerged during the discussions. The analysis was an iterative process, involving multiple rounds of reviewing and refining thematic groupings as patterns emerged. Annotations were added where relevant, and the coded themes were cross-referenced with feedback from the second researcher to ensure accuracy and consistency.

Throughout the analysis, a collaborative approach was maintained to ensure consistency in the coding process. Regular discussions between the primary researcher and the second researcher helped refine the analysis and thematic organization, validating emerging themes against the raw data. This iterative process ensured that key insights were accurately captured and reflected in the final interpretation of the findings.

Appendix B: Rapid Response Moderator Script and Questions

Hour:Minute	Action	Script
10 minutes early	Log in & check screen share & host designations	N/A
5 minutes early	Start letting participants in. Change to first names	“Hello, welcome. We’re going to wait for the last few folks to join before getting started.”
0:00	Mute all participants.	<p>“Welcome everyone. My name is Dr. Deborah Hilbert. You may call me Deb. I am an urban tree research scientist with the University of Florida and a consulting urban forester. I will be facilitating this meeting today with the help of my co-facilitator, Dr. Andrew Koeser. Andrew, would you like to introduce yourself? And here to observe and assist are our fellow researchers Drs. Chris Riley, Dexter Locke, and Nancy Sonti. XX, would you introduce yourselves? As facilitators, we are here to moderate the discussion and keep the group on topic, but not to give our own perspectives on the discussion itself. We want to hear from you. We’re also here to help if you have technical issues.</p> <p>Before we get started, I want to show you some of the features on Zoom. First off, you can change the display on your screen by ...</p> <p>We changed your names so that only your first name is displayed. You may change it to a different name by clicking on the three little dots next to your thumbnail.</p> <p>I encourage you to leave your video on so that we can all be invested. If you find looking at yourself uncomfortable or distracting, you can go to Gallery mode (the <i>Brady Bunch</i>–style view), right-click your video to display the menu and choose “Hide Self View.”</p> <p>You can raise your hands by going to...</p> <p>Does anyone have any questions about how to use Zoom?”</p>
0:05	HIT RECORD TO CLOUD (Deb)	“Great. We will proceed.”
0:06	Share Agenda Slide	“Here is the agenda for the day. Today, we will spend time discussing your experiences with growing and purchasing trees in the Chesapeake Bay Watershed region. Specifically, we want to hear your views about the constraints and opportunities for creating a sustainable supply of quality, diverse, climate-ready tree species for use in urban areas. During this meeting, I'm going to ask you several questions. Please share your honest opinions and thoughts on each of the questions. Your input is an important part of our effort to better understand what your strategies are for growing or procuring trees, and how this may affect the overall supply of trees for the urban forests in the Chesapeake Bay Watershed.”

0:07	Share Ground Rules Slide	<p>“We want to hear from everyone, and this is your conversation. With that in mind, let’s set some ground rules that will help maximize our time together. First off, silence your mobile phones. Close competing windows, Jump in or raise your hand if you haven’t been able to share. Do not be critical or judgemental of others. You may address each other if you’d like to follow up on something during the discussion. Everything that is said in this meeting should remain here.”</p> <p>“Everyone’s experiences and opinions are important. I may call on you if I haven’t heard from you in a while. I also want to remind you that your participation is voluntary. You do not have to answer any question you do not wish to answer. You may leave at any time you wish.”</p> <p>“This session is being recorded so that I can obtain a transcript of what is said when I summarize information later. This recording will not be posted anywhere. The information which you give will only be used by the researchers involved in this study and their partners at the Chesapeake Bay Trust. The final report and publication will not identify the views of any specific participant. Everyone’s comments will be kept confidential. Any quotes that are used will not be attributed to anyone by name.”</p> <p>Are there any questions? Let’s get started...”</p>
0:10	Share Ice Breaker slide Call on participants alphabetically Jam Board: <i>Favorite species</i>	<p>“We are going to go around by alphabetical order to hear your answer to the ice breaker question: ‘Tell us your first name, location, which sector of the landscape industry you work in, and your favorite tree species.’”</p> <p>“Thanks for sharing. We’re going to delve into some more detailed questions. Some of these questions will be directed towards certain participants, but it’s important that we all understand their experiences. Others will get a chance to respond.”</p>
0:15	Put question in chat Put answers on Jam Board: <i>Grower factors</i>	<p>“Could those of you who grow trees share with us what factors you consider when deciding which trees to grow?”</p> <p>“Which factor would rank as the most important to your decision-making?”</p> <p>“What do those of you who purchase or plant trees think about these responses? Any surprises? Any questions for the growers?”</p>
0:30	Put answers on Jam Board: <i>Purchaser factors</i>	<p>“Could those of you who purchase or plant trees share with us what factors you consider when deciding which trees to choose?”</p> <p>“Which factor would rank as the most important to your decision-making?”</p> <p>“What do those of you who grow trees think about these responses? Any surprises? Any questions for the group?”</p>

0:45	Put answers on Jam Board: <i>Species Wishlist</i>	<p>“Pretend you can grow or procure any regionally-appropriate species you want. What tree species would you choose to use in the region’s urban areas?”</p> <p>“Can you explain why you chose XX species? What attributes are important?”</p> <p>“Climate change projections indicate that by the 2080s, most parts of the Watershed will experience an average of 4.5 to 10 degrees warming with more extreme drought and precipitation events. In light of climate change, would any of your answers above change? Do you have additional suggestions?”</p>
1:00	Share Break Slide	Thanks so much for sharing your experiences and ideas so far. We’re going to take a 10-min break. Please be back promptly at XX:XX.
1:10	Come back from break Restart Recording Jam board: <i>Barriers</i>	<p>“Welcome back. We’ve discussed the factors that influence the selection of tree species and your experiences with this process. Let’s talk about challenges in urban tree supply.</p> <p>“For those who purchase or plant trees, what do you think are barriers that prevent you from purchasing the trees you desire for urban use?”</p> <p>“Could those of you who grow trees share with us the barriers that prevent you from growing more trees for urban use?”</p>
1:20	Jam board: <i>Solutions</i>	<p>“Now let’s talk about what would need to happen to overcome the challenges to sourcing trees in the quantity and quality needed for urban landscapes:</p> <p>What is something your industry could do differently? What is something another industry could do to support your efforts?</p> <p>Are there examples of successful tree procurement contracts or other arrangements through which tree supply goals were met?”</p>
1:40	Share summary slide	<p>“We’ve covered the main questions and are at a good stopping point. Based on this discussion, we think the major points that were brought up were XX, XX, XX.” (Share a slide that has these points typed up.)”</p> <p>How well does this summary capture what was said here?</p> <p>Remember, the purpose of this study is to understand the constraints and opportunities for creating a sustainable supply of quality, diverse, climate-ready tree species for use in urban areas in the Chesapeake Bay Watershed.</p> <p>Regarding the purpose of the study, is there anything that we should have talked about but didn’t? Is there anything that you have thought of that we didn’t discuss?”</p>

1:50	Thank you slide	<p>“Thank you all again for your time and input. This is so helpful as we move forward in understanding this topic. We have a few more groups to conduct. We are organizing a 1-day virtual forum in August to discuss the findings of these focus groups and to hear talks from others on this topic. Please let me know if you would like to be invited to the forum or if you know of others who may want to attend or be a speaker.</p> <p>If there are no more questions from you, then I’ll call this meeting adjourned.”</p>
2:00	Stop Record. Save chat. Save Jam Boards. End meeting.	
2:00	Debrief between facilitators	<ol style="list-style-type: none"> 1) What were the themes? 2) What are the most important points that we’ve learned from this group? 3) What was surprising or unexpected? 4) What quotes were particularly helpful? 5) How was this group similar to or different from earlier groups? 6) Does anything need to be changed before the next group?
2:15	Save all data!	Any lists, ratings, chat dialogue, or other important notes will be organized and labeled immediately after the group.

Appendix C: Rapid Assessment Meeting Summaries

At the conclusion of each Rapid Assessment focus group, the research team presented a list of talking points that emerged as key themes from the session. Participants were invited to review, modify, add, or delete items as they deemed necessary. The final points are listed below:

Focus Group 1:

- It is difficult to plan ahead, as money fluctuates quickly, creating instability and sudden increases in demand.
- Diversity is not often an issue in smaller tree sizes, but it becomes a challenge with larger sizes.
- Contract growing has potential to reduce risk and increase supply, provided the funding can be secured.
- Technical expertise is essential for selecting the right trees, maintaining plantings, and setting up contracts. This expertise needs long-term financial support and recognition.
- More communication is needed—connecting growers with buyers, and politicians with technical experts.

Focus Group 2:

- Nurseries serve a variety of clients with differing tree needs. However, demand and availability are often driven by large purchasers, such as developers.
- Diversity is a challenge not only in species but also in stock type and size.
- While some buyers demand high-quality trees, there will always be others who are less selective or unable to be picky.
- More partnerships are needed, including collaborations with state forest service nurseries, nursery and landscape associations, better communication, resource sharing (e.g., brokers), and a centralized plant finder database.
- Climate change is a pressing issue—planning ahead for the Bay Area’s shifting climate and helping manage this transition.

Focus Group 3:

- Growing choices are primarily determined by what can grow well and what sells.
- Producing and transporting trees involves logistical challenges, such as long production cycles, busy planting seasons, and external market factors (e.g., out-of-state liquidation sales).
- Long-term relationships and ongoing communication can help address these issues. Repeat bids and continuous dialogue can shape availability and future contracts.
- Educating contractors and the public is key to overcoming these challenges. There is a general lack of awareness about the logistics needed for successful plantings, where to source trees, and which nurseries are available.