

EMERALD ASH BORER TASK FORCE

Board Work Session

November 16, 2026

BOD WORK SESSION

EAB Task Force members and participants
EAB Threat to Oregon Country Fair
Response Planning Objectives
Structured Decision Making Process

- Problem Statement
- Values-based Decision Making
- Values-based Objective Hierarchy
- EAB Task Force Vision

Developing Alternatives:

- Articulating Actions
- Formulating Choices
- Potential Alternatives (2027)
- Estimating Consequences

2027 Response Plan Alternative (Suggestion Actions)

- Landscape Framework
- Current Action (Double Down)
- New Enabling Actions

SDM to determine 5-10 Woodland Management Alternative

- Inoculation Strategy Alternatives
- Canopy Management Strategy Alternative

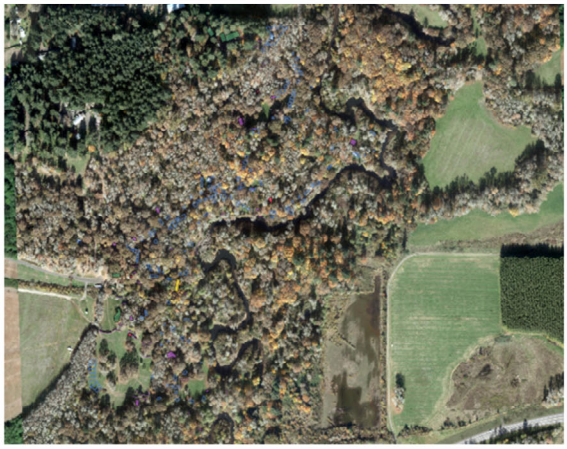
Questions & Discussion
2027 EAB Response Plan Materials

EAB TASK FORCE MEMBERS and PARTICIPANTS

John Alexander — Facilitator (Klamath Bird Observatory/Community Village) — Conservation planning
Tom Will — Structured Decision Coach — Conservation planning
Ann Bennett-Rogers (Archaeology, BOD) — Natural resource management
Todd Buchholz (Fire Crew) — Forest & fire management
Paxton Hoag (BOD, Film Crew) — Community perspective
Amber Coats (Elder) — Community perspective
Glenn Johnson (StewardShip, LUMP) — Wildlife biology
Jonathan Pincus (Path Planning, Site Crew) — Historic preservation, event management
Tom Gannon (StewardShip) — Site management
Glenn Dolphin (Traffic Crew, LUMP) — EAB management
Alexis Maddock (OCF Site Manager) — Site & crew management
Kirsten Bolton (OCF Executive Director) — Organizational management

Amber Coats (Elder) — Community perspective
Abby Swartz (Sapling Stewardship) — Community perspective
Anna Scott (LUMP) — Strategic planning
Rosanna Costello (LUMP) GIS applications

THE EAB THREAT



The Emerald Ash Borer (EAB) — now detected within 70 miles of the Fair — is predicted to destroy virtually all Oregon Ash trees within 10–20 years, severely impacting the Fair's shade

EAB arrival poses significant safety hazards that put at risk holding the Fair on our designated Fairground sites

Not being able to host the Fair in any given year puts at risk our ability to have the Fair at all

The most imminent threat to the health and integrity of the Fairground woodlands is the rapid range expansion of the invasive Emerald Ash Borer (EAB), which has recently become established in four counties in the northern Willamette Valley of Oregon. While it is uncertain when the ash borer will reach the southern Willamette Valley and start affecting trees at the Fairgrounds—expert opinion ranges from within the next few years to 15 or 20 at most—it is certain that in the coming decades it will infect the site. When EAB does arrive, we can expect (based on observations from the midwestern and eastern US) that ash at the Fair site will deteriorate quickly—within 4 to 10 years Oregon Ash may cease to be a functional component of the tree canopy. A typical effect of EAB is to cause "crown die-off"—trees dying from the top-down as the tree attempts to re-allocate resources to the lower parts of the tree. Trees with dead and dying crowns will yield unsafe conditions for hosting the public, camping, or even cutting affected trees to remove them. The threat that EAB poses may be exacerbated by increased fire hazards resulting from combinations of forest fuel accumulation and climate change.

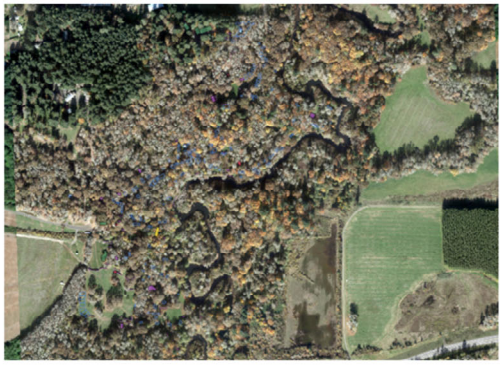
Thus:

In the face of changing environmental conditions—especially the anticipated arrival of Emerald Ash Borer—what woodland management actions, over what time scale, should the Oregon Country Fair implement to sustain the benefits and

values that the wooded Fairground has provided to Fairgoers over the last five decades?

RESPONSE PLANNAING OBJECTIVES

Why do we need our own plan?



OCF Faces Unique Challenges

Each year our natural forested floodplain transforms into a densely inhabited human environment

This "human environment" includes a 100-acre area dominated by Oregon Ash

OCF's Non-conforming Use Permit

- Fair event cannot be moved from this footprint
- Fair must be held annually

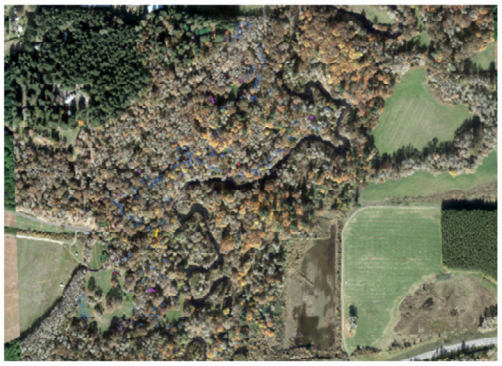
In planning a response to EAB, the OCF has unique challenges compared to other regional land managers. The forest site where the event is held transforms from what is essentially a—up to 35,000 Fairgoers and volunteers on site each day, mostly within a 100-acre area dominated by Oregon Ash cover predicted to be decimated by EAB.

Because the OCF's Non-conforming Use Permit from Lane County is tied to a certain geographical footprint, the Fair event cannot simply be moved. The same permit stipulates the event be held annually, so canceling the event for one or more years once EAB starts to devastate the site is also not an option.

RESPONSE PLAN OBJECTIVES

Why do we need our own plan?

Most Urban EAB response plans target traditional neighborhood settings



OCF has a tradition of deferring to natural processes, so …

the OCF EAB Plan will frame its EAB response as **comprehensive woodland management strategies** that will

- provide decision making transparency
- guide the Fair into an ecologically sound future
- respond to changing human and natural scenarios
- provide measurable investment outcomes
- monitor success and adapt accordingly

Decision Context and Framing

The Oregon Country Fair Board is responsible for setting policies that will be implemented by the Fair's operations staff—following guidance provided by the Emerald Ash Borer Response Planning Task Force (EAB Task Force), which is made of individuals representing a diversity of OCF community interests. While Emerald Ash Borer poses the most imminent threat to the integrity of the OCF forest, we recognize that any set of viable strategic forest management practices will likely need to consider other forest health challenges—including departure from the current range of variability of forest structure, composition, and disturbance; the disruption of indigenous management since the onset of European settlement; the expanding ranges of invasive plant species; and radical alterations in the climatic regime due to consequences of global climate change. The Emerald Ash Borer Response Planning Task Force will likely need input from forest management experts and neighboring natural resource management partners representing state and federal agencies as well as tribal, private, and NGO entities. Regional land managers and scientists can assist OCF policy and implementation decisions since the entities noted above likely

will also be responding to the same threats to forest integrity.

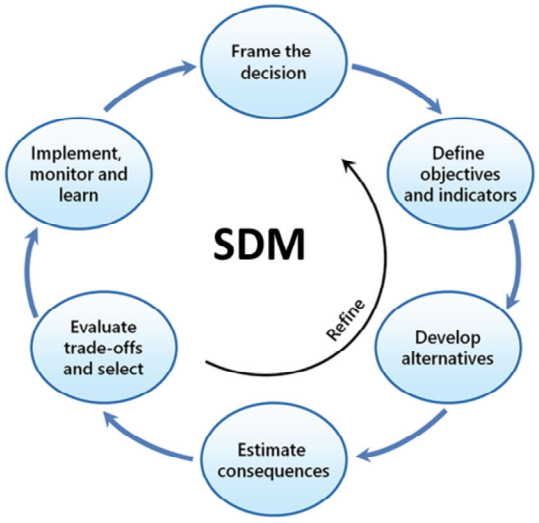
In planning a response to EAB, the OCF has unique challenges compared to other regional land managers. The forest site where the event is held transforms from what is essentially a natural forested floodplain most of the year into a densely inhabited human environment—up to 35,000 Fairgoers and volunteers on site each day, mostly within a 100-acre area dominated by Oregon Ash cover predicted to be decimated by EAB. Because the OCF's Non-conforming Use Permit from Lane County is tied to a certain geographical footprint, the Fair event cannot simply be moved. The same permit stipulates the event be held annually, so canceling the event for one or more years once EAB starts to devastate the site is also not an option. The Fair community's tradition of deferring to natural processes and an aversion to cutting trees may limit or at least delay some options (e.g., managing dense ash stands to allow release of oak saplings to mature); at the very least, this tradition will necessitate a carefully crafted communication and education plan to sustain support of the Fair Family.

In summary, the arrival of EAB in combination with the Fair's dearly held land use traditions comprises an unprecedented existential threat to the Fair's renowned primary event. Given current knowledge and experience, we anticipate that EAB, once it arrives, will be here to stay. Emerald Ash Borer—together with its effects on Oregon Ash—will likely be a new member of the greater Fairground community. Accommodating EAB in a habitat intensely occupied by humans will likely require a significant—and long-lasting—shift in the way the Fair Family envisions the Fair environment.

Desired Outcomes of the Planning Process

- Clear articulation of OCF values driving future change of the OCF natural environment
- Multiple alternative strategies for meeting current and future threats to OCF forest integrity
- A process for evaluating the performance of alternative solutions relative to articulated values
- A process for evaluating potential trade-offs and making well-informed and defensible decisions
- Agreement and buy-in of the OCF Board, Fair Family, and key partners

A STRUCTURED DECISION MAKING PROCESS

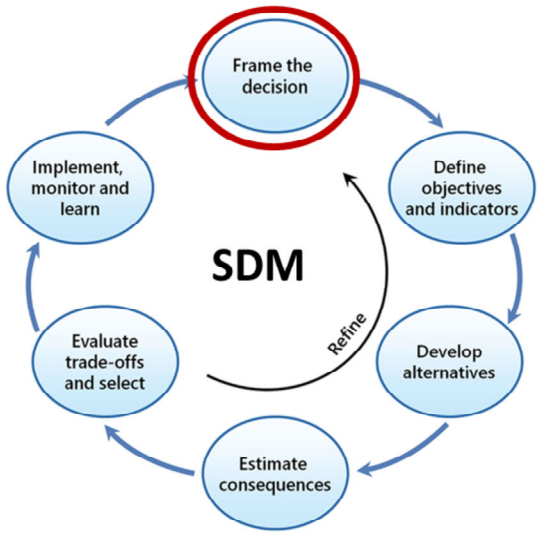


An organized approach for working together to make informed and transparent choices in complex decision situations

- **Anchored by the fundamental values that underpin decisions (as opposed to projected solutions)**
- **Identification of alternative solutions**
- **Evaluation of alternatives relative to fundamental values**
- **Analysis of trade-offs among competing alternatives**
- **Adaptive to future change**

https://openeducationalberta.ca/schneider/chapter/structured-decision-making/

SDM is a well-developed process used when practitioners need to make a choice among competing alternatives; it stresses the importance of identifying and clarifying the core values that underly and will likely drive the decisions people make, thus unifying the subjective realm with the more objective, evidence-based or data-driven realm (cf. Hammond et al. 1999, Gregory et al. 2012). In an SDM process, competing alternatives are analyzed and ranked relative to the objective criteria derived from the fundamental values articulated by decision makers. SDM tools and techniques can be used at any decision point in a planning process, regardless of scale or difficulty, but even minor decisions would still be evaluated using the criteria derived from the original fundamental values. The fundamental values identified at the outset of the planning process thus serve as an anchor for all subsequent decisions and actions.



Problem Statement

In the face of changing environmental conditions — especially the anticipated arrival of EAB — what woodland management actions, over what time scale, should the Oregon Country Fair implement to sustain the benefits and values that the wooded Fairground has provided to Fairgoers over the last five decades?

Introduction

For 54 years, the Oregon Country Fair (OCF) has hosted a renowned annual cultural arts festival each July, been an active local philanthropic partner, and conducted other activities in-line with its mission: "to nourish the spirit, explore living artfully and authentically on earth, and transform culture in magical, joyous, and healthy ways." A large portion of that experience can be attributed to the unique characteristics of the Fairgrounds—the 500-acre site the OCF organization owns where the annual event is hosted. The Fair event is focused on about 100 acres of the site near the Long Tom River in a woodland setting in areas where Oregon Ash trees comprise most of the shade for the public and volunteers. Visitors can delight in both the natural intricacies of the forest as well as human-created art, crafts, music and education. The Fair site's unique natural environment is known for contributing to the Fair experience almost as much as the human celebrations that take place within its enabling embrace. This natural environment also represents an excellent example of a bottomland hardwood forest with mixed species and age classes on a naturally connected floodplain.

Decision Problem

Unfortunately, the Fair site is currently threatened by environmental changes that may substantially alter its unique characteristics—including the shade that provides respite from the summer sun and heat during the annual Fair event. Invasions of exotic plants and insects suggest that some degree of human forest management will be necessary to sustain the values that the Fairgrounds have offered to Fairgoers over the last half century. The ever-increasing need for a more intentional

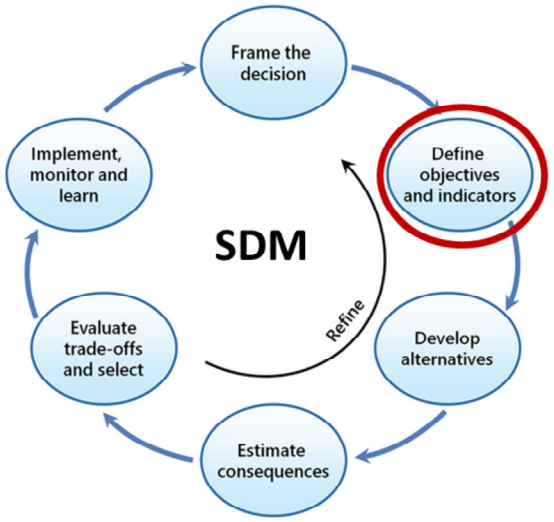
ecosystem management approach of the OCF site is somewhat in conflict with the traditional ethos of many land managers at the Fair. There is a saying, often used within land management documents and by those volunteers lending their expertise and/or time to the Fair: "Above all, reverence for the land." This statement and similar sentiments encourage a land management ethic that could be summarized as "the more natural the better." However, what is becoming increasingly obvious is that relying on "natural" processes may not be in the best interest of ecosystem integrity at the site—or even compatible with hosting the annual Fair event in a safe and reliable manner.

The most imminent threat to the health and integrity of the Fairground woodlands is the rapid range expansion of the invasive Emerald Ash Borer (EAB), which has recently become established in four counties in the northern Willamette Valley of Oregon. While it is uncertain when the ash borer will reach the southern Willamette Valley and start affecting trees at the Fairgrounds—expert opinion ranges from within the next few years to 15 or 20 at most—it is certain that in the coming decades it will infect the site. When EAB does arrive, we can expect (based on observations from the midwestern and eastern US) that ash at the Fair site will deteriorate quickly—within 4 to 10 years Oregon Ash may cease to be a functional component of the tree canopy. A typical effect of EAB is to cause "crown die-off"—trees dying from the top-down as the tree attempts to re-allocate resources to the lower parts of the tree. Trees with dead and dying crowns will yield unsafe conditions for hosting the public, camping, or even cutting affected trees to remove them. The threat that EAB poses may be exacerbated by increased fire hazards resulting from combinations of forest fuel accumulation and climate change.

Thus:

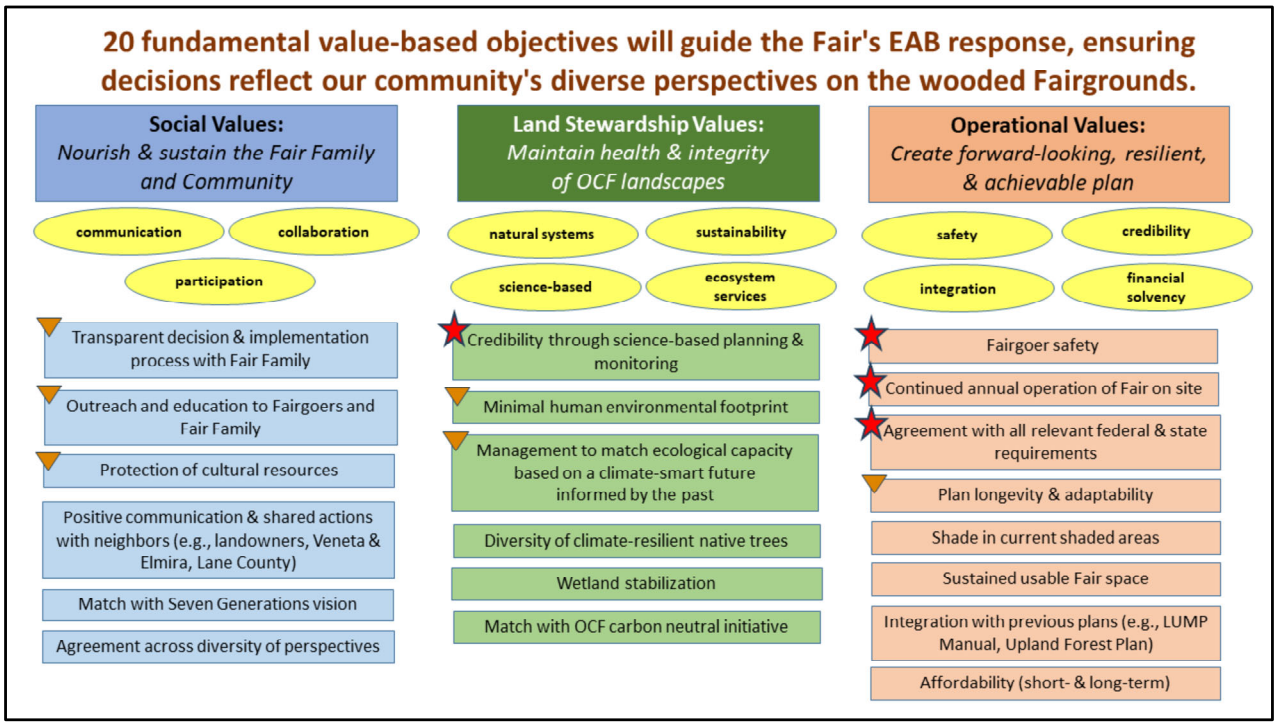
> *In the face of changing environmental conditions—especially the anticipated arrival of Emerald Ash Borer—what woodland management actions, over what time scale, should the Oregon Country Fair implement to sustain the benefits and values that the wooded Fairground has provided to Fairgoers over the last five decades?*

Value-based Decision Making



- As we consider addressing the arrival of EAB, what do we care about?
- Which of these concerns seem to be the most important to consider in the context of the Problem Statement
- Identify sets of core (fundamental) values
- Values can then be viewed as planning objectives moving forward
- By assigning metrics to each objective, the core values then become the criteria through which we can evaluate competing alternative solutions

The EAB Task Force initiated the identification of fundamental values that are important in making decisions related to developing and implementing a response plan for EAB



Structured Decision Making

Values-based Objective Hierarchy

The EAB Task Force is using Structured Decision Making (SDM) as a framework for evaluating, prioritizing, and choosing preferred alternatives. This involves an adaptive approach to developing a values hierarchy for the Fair. This hierarchy will be used to make informed value-based judgments about key trade-offs relating to alternative strategies and actions. This slide shows the latest version of the TF's SDM values hierarchy. High-level values (i.e., fundamental values) are presented at the top, with descriptive terms included as yellow circles. Bellow these

fundamental values are underlying levels of more specific value-based objectives.

In SDM, this hierarchy of values-based objectives is used to construct matrices that include the values hierarchy on one axis and alternative EAB response strategies and actions on the second axis. The matrix then serves as a ctool for evaluating how suites of values based objectives may be satisfied through alternative courses of action. Ideally, by clarifying common and divergent values that might underpin different opinions about alternatives, the TF will derive solutions that are acceptable across our range of values and opinions. This tool will facilitate a visual, qualitative, and even quantitative approach to evaluating and prioritizing alternative strategies and actions based on the values hierarchy.

EAB TASK FORCE VISION

When we envision a future 20 to 30 years from the present,
we will know that we have accomplished excellent stewardship
with an appreciation for the historic ecology of the OCF Fairgrounds.

We will have overcome challenges like the arrival of Emerald Ash Borer
by co-creating a novel, resilient, open socio-ecological system
that is adaptable to climate change and that sustains
the cultural transformation and community that is the OCF.

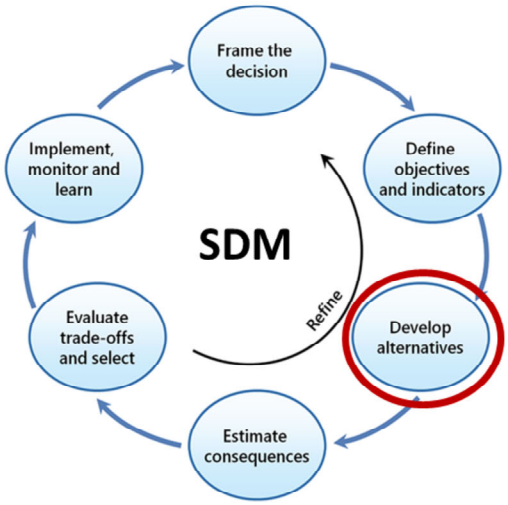
We will have institutionalized long-term land management principles
based on the best available science, transparent processes, and inclusive engagement
— all grounded on the OCF founding principles.

We will have educated the Fair Family about working with the land.

The OCF will occur every year in a safe woodland landscape
—although that woodland might be comprised of different tree species that presently occur.

In short, **We envision**
an ecologically resilient managed wooded landscape
that sustains the Oregon Country Fair.

Developing Alternatives : Articulating Actions



What are the specific ACTIONS we could take to address the anticipated arrival of EAB at the Fairgrounds?

- Preventive — how can we slow the arrival of EAB?
- Operational — do we have the necessary data to map and monitor actions and effects on the Fairgrounds?
- Precautionary management — can we proactively create a Fair environment that will minimize impact when EAB arrives?
- Ecological — will our proposed actions match the Fairground floodplain ecology?
- Trust building— how can we best communicate with Fair Family and outside partners regarding the EAB threat and our strategies to address it?
- Capacity — how can we manage and fund the OCF response to EAB and future landscape management challenges?



The EAB Task Force developed, discussed, and refined suites of actions (strategies) that would comprise a comprehensive response to the EAB threat and would serve as a foundation for future woodland management. Each of the actions will be described in detail in the final 20-year Plan. The Inoculation Strategy below is an example of one of the team's Action write-ups:

STRATEGY SHORT NAME: Inoculation

PROACTIVE and REACTIVE: Proactive and Reactive (still effective once EAB is detected).

FULL STRATEGY DESCRIPTION:

Select trees for trunk injection treatment, most likely with the systemic insecticide *Emamectin benzoate* known to primarily target and be effective against EAB. Candidate trees will be selected using a decision matrix (as described below) to control costs, facilitate decision transparency, and generate community buy-in. To be effective, individual tree inoculation needs to be repeated every 2-3 years to ensure resistance to EAB damage.

The number of trees selected annually for inoculation may occur in phases depending on the perceived likelihood of EAB arrival at the Fair (as indicated by the proximity of current

EAB detections in Oregon) or risk tolerance of EAB planners. For example:

Response Level =	**Cautious**	**Moderate**	**Aggressive**
Nearest Detection:	75 miles (current)	35 miles	10 miles
Which Trees:	Selected established & mature trees test trees	Established & mature trees large campsite trees	All large & healthy trees
Fair Location:	Low use area	Moderate use areas	All use areas

Initially, selected trees should be readily visible to the Fair Family (to facilitate education and buy-in) but not located where Fair Family and visitors congregate (e.g., Main Camp) or in sensitive areas (e.g., food booths) to alleviate potential human health concerns and community pushback on the use of pesticides on the Fairgrounds.

Selection Criteria: Trees should be selected based on a number of criteria that consider tree health (inoculation of unhealthy trees is a dubious investment strategy) and human impact.

Ash Tree Inoculation Decision Criteria

Tree Health — OCF arborists will determine approximate age, health, and viability of candidate trees or tree groupings.

Historically Significant & Memorial Trees — Trees nominated by the OCF community and/or proposed by crew/staff because of their special importance.

Proximity Species — Will surrounding trees or understory species benefit from inoculation of the candidate tree? Will understory planting contribute to the ecological health of the candidate tree environment?

Canopy & Understory Health — Does the candidate tree or grouping support local canopy and understory health or would inoculation inadvertently hinder the

recruitment/release of non-ash canopy trees?

Event Aesthetics / Shade — Does the candidate tree or tree grouping contribute substantially to the essential path shading or aesthetics of the Fair event?

Designation of inoculation candidate trees will be made by small team of Fair arborists and others knowledgeable about Fair ecology and human history using a scoring matrix. E.g., each of the criteria can be scored on a basis of 1–5 regarding suitability for each candidate tree; some criteria could be weighted more heavily than others.

TARGET MANAGEMENT UNIT(S):

All woodland public use areas of the Fairgrounds, with areas prioritized according to perceived likelihood of EAB arrival at the Fair (as indicated by the proximity of current EAB detections in Oregon) or risk tolerance of EAB planners as outlined in the table in the full description section.

DATA NEEDED:

Map of all ash tree locations, especially trees of substantial size in high use and camping areas. Trees selected for and receiving inoculation should be clearly indicated, mapped in the GBS, and/or designated by clear location descriptions (e.g., "Info Booth at Upper River Loop").

EDUCATION / OUTREACH NEEDED:

Negative reactions and pushback are likely when folks hear that "chemicals" may be injected into our lovely shade trees, so education/outreach is critical for Fair Family buy-in (see also Stewardship Strategy). Ideally, phased inoculation implementation will be preceded with a few select demonstration trees designed for educating and interacting with the Fair Family on this strategy [See notes on Risks below].

TRIGGER:

Current Oregon EAB detections (within 75 miles) suggest that education-tailored inoculation and testing should begin immediately.

MANAGEMENT PRESCRIPTION:

Inoculation should be performed only by a licensed pesticide applicator. (see ABR's comments below).

LIKELY CONSEQUENCES/RISKS:

policy, hence the importance of a substantial education and outreach effort.

- **Effects on pollinators:** Systemic trunk injections pose minimal risks to pollinators like bees and butterflies. Trunk injection must occur after leaf-out, and by the time ash leaves emerge in spring, flowers are no longer producing pollen and insects visiting ash flowers are not likely to be exposed to the chemical. Additionally, ash trees are wind-pollinated and produce flowers that are not particularly attractive to insects. Research indicates that ash pollen comprises only a small percentage of the pollen collected by pollinating insects.
- **Birds:** Systemic trunk injections pose little risk to most nontarget species when properly applied by a licensed pesticide applicator. Because these insecticides are injected directly into the tree, only insects living underneath the bark or feeding on the leaves of a treated tree may be directly affected. Woodpeckers, that eat EAB larvae living in ash, are also minimally affected by systemic treatments because they only prey on live larvae, not the dead larvae that have been exposed to insecticides. Additionally, research has indicated that chemical accumulation from systemic injections in fallen tree leaves is extremely low and has negligible effects on the organisms who decompose them.
- **Humans:** *Emamectin benzoate* is NOT very toxic to humans unless consumed directly through accident, negligence, or idiocy (Renthlei Lalmalsawmi et al. 2024). When applied directly to human skin, lungs, eyes, etc., *Emamectin benzoate* can lead to short term health issues such as asurface rash (cf. Durkin 2010). Thus there is a VERY SMALL risk to a healthy human once the chemical is injected into a tree.

ASSESSMENT METRICS:

All inoculated ash (and surrounding understory and neighboring trees) should be continuously monitored for EAB infection and tree health, and results used to evaluate and adaptively manage continuation of the inoculation strategy.

DESIRED FUTURE CONDITIONS (5 YEARS OUT):

Two full founds of inoculation result in healthy ash trees that continue to provide shade and aesthetic appeal. No detected pesticide effects on surrounding understory vegetation.

DESIRED FUTURE CONDITIONS (10 YEARS OUT):

Only a handful of legacy trees continue to be inoculated. Some evidence of EAB resistance in uninoculated trees. As dying ash trees are removed, non-ash released trees develop to provide future shade canopy.

DESIRED FUTURE CONDITIONS (30 YEARS OUT):

Non-ash canopy established. Inoculation no longer necessary.

COST ESTIMATE (per acre):

Treatment is the least expensive option in responding to EAB, at least in the near term. Generally, a tree can be treated for about 20 years before the financial cost is equal to that of removing and replacing a healthy tree.

[Properly licensed, Todd Ebans would charge $10 per inch of DBH to inoculate trees at OCF, which he says is absolutely at the bottom of the scale when it comes to what other companies are charging.]

APPLICATION NOTES:

Trunk Injection treatment involves the use of a systemic insecticide (a substance used to kill insects as it is transported through plant tissue) injected directly into the tree trunk at its base. The inoculation is done only when trees are flush with leaves (April-October). The injections need to be repeated every one to three years, depending on the active ingredient of the inoculant, tree condition, and the extent of EAB presence. Proper watering prior to treatment maximizes effectiveness.

Emamectin benzoate is an insecticide derived from the *avermectin* family of natural products. It has a unique translocation behavior in trees when applied by systemic tree microinjection (TMI) and is highly toxic to EAB in adult and larval forms. Even at the lowest application rate (amount of insecticide), *emamectin benzoate* is the most effective EAB treatment in preventing canopy decline and lowering larval densities. *Emamectin benzoate* is applied every two to three years and is most effective when applied in spring, after leaves have emerged. A licensed pesticide applicator is required to administer *emamectin benzoate*.

COMMENTS:

- This strategy may be coupled with the Inoculation Effects Monitoring strategy.
- A clear definition of the attributes of a good candidate tree for inoculation is essential: age, height, DBH, and proximate plant associations should be considered as some of the variables. This clarity is important for education as well as for people who may want to inoculate ash trees on their own. However, If individuals desire to inoculate a tree at their booth or campsite, it would be ideal if they followed the established OCF guidelines and decision criteria. Healthy, large trees (≥ 6" diameter) are the best candidates because (1) they have the highest change of survival from EAB and (2) large ash provide benefits that can cannot be readily replaced by a newly panted tree (ODF, 2024).
- Costs should be itemized for inoculation and labor separately. That way, if the arborist is volunteering, we have a cost estimate for the labor should we need to seek a contractor to inoculate in the future. Subsequent year costs need to be adjusted for

inflation (4%?).

- Membership outreach should include the people who camp or work next to inoculated trees.
- Inoculated trees should be designated in the Fair GPS and with metal tags (or metal detector spikes) including appropriate information.

Comments from Todd Ebans:

- The city of Milwaukee, Wisconsin, has been treating somewhere around 250k ash trees starting in 2007. To this day they haven't lost a single treated ash tree to an EAB infestation.
- Treatment of 20% of ash trees within a colony of ash can help offer protection to around 80-90% of adjacent untreated trees.
- Per the ISA BMP (best management practice): Injections in Oregon should occur in mid-late May to ensure that the highest concentrations of the product are in the cellular structure of the tree when larvae are pupating around mid-late June. This timing is important not only for the treatment itself but also to allow time to acquire the correct pesticide applicators license.
- Per the ODA, it's safe to inject any ash tree that is more than 3 feet away from standing water, including seasonal floodplains like the OCF property. At Jackson Bottom wetlands in Hillsboro, a floodplain very similar to the riparian floodplain on OCF property, there were no fewer than 100 ash trees being treated for EAB since 2023, all in the floodplain, some even underwater.
- EAB injections have no adverse effects on pollinators seeking out the flowers on ash trees in spring, as ash flowers support over 35 different types of insects. Because of the timing of treatment being after the flowers have expired, there is no chance of the treatment harming pollinators.
- Leaves from Ash trees treated with *Emamectin Benzoate* have a half-life of 20 days with trace amounts of EB in the leaf tissue. But once the sun hits the fallen leaf, it dissipates what minute amount of EB is still in the leaf tissue almost immediately. This is why the ODA , ODF, and ISA have concluded it is safe to treat trees in riparian areas as long as the tree isn't within that 3-foot margin of standing water. Essentially, the leaf litter is non-toxic to all life.
- There are no documented negative effects to avian life from the treatment of the trees.
- Mass treatments on a larger scale should only begin once EAB is confirmed to be 15 miles away. Currently the closest confirmed quarantine area is approximately 70 miles from OCF property. Ultimately treatment of a handful of trees starting in 2027 is as much about raising awareness that this is really happening. There is no concern for treating "too early" in terms of the closest quarantine area.

References:

Burkhard, R. and H. Binz. 2015. Environmental fate of emamectin benzoate after tree micro injection of horse chestnut trees. Environmental Toxicology and Chemistry 34:(2), pp. 297–302.

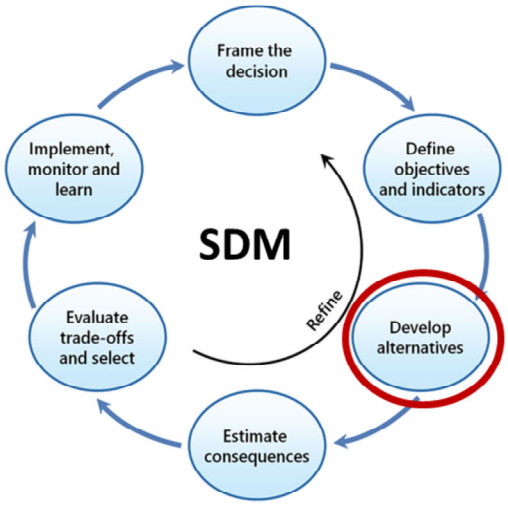
Durkin, P.R. 2010. Emamectin benzoate, Human Health and Ecological Risk Assessment Final Report.
Syracuse Environmental Research Associates, Inc. for USDA/Forest Service, Southern Region.

Oregon Department of Forestry Insecticide Treatments. 2024
https://www.oregon.gov/odf/forestbenefits/Documents/eab-treatment-fact-sheet_2024.pdf

Oregon Department of Forestry Monthly Newsletter, March 2024. Oregon Tree Health Threats.
https://www.oregon.gov/odf/forestbenefits/Documents/oregon-tree-health-threats-bulletin-march-2024.pdf

Lalmalsawmi, R. et al. 2024. Management and prognosis of acute Emamectin Benzoate poisoning in a human. Toxicology Reports 13, December 2024
https://www.sciencedirect.com/science/article/pii/S2214750024001276

Developing Alternatives : Formulating Choices



How do the various ACTIONS we articulated be combined into a set of ALTERNATIVES so that we can make a data-driven and transparent about how best to proceed in responding to the anticipated arrival of EAB?

- Actions are combined into portfolios (Alternatives) that *differ in the primary emphasis and intensity* of proposed actions.

Potential Alternatives for 2027 Fair Season

EMERALD ASH BORER RESPONSE AT OREGON COUNTRY FAIR — for 2027 IMPLEMENTATION

ALTERNATIVES → ACTIONS ↓	ALTERNATIVE 1 NO ACTION	ALTERNATIVE 2 POTENTIAL ACTIONS DEMONSTRATIONS	ALTERNATIVE 3 MODERATE PROACTION WOODLAND SHAPING FOCUS	ALTERNATIVE 4 INOCULATION FOCUS (Alexis & Todd's Proposal to LUMP)	ALTERNATIVE 5 SUBSTANTIAL PROACTION (Alternatives 3 + 4)
Monitoring	No monitoring absolutely necessary, but likely continued.	Continued monitoring for EAB presence.	Continued monitoring for EAB presence. Monitoring of topped and inoculated trees.	Continued monitoring for EAB presence. Inoculated trees marked and mapped. Monitoring protocol in place to track health of inoculated trees and surrounding vegetation. Inventory and mapping of 300 inoculation candidate ash trees.	Continued monitoring for EAB presence. Inoculated trees marked and mapped. Monitoring protocol in place to track health of inoculated trees and surrounding vegetation. Inventory and mapping of 300 inoculation candidate ash trees.
Prevention (EAB Security)	Cuurent policy of public awareness ONLY IF DESIRED	Active outreach re. no off-site firewood	Alt 2, plus random checking of 5% of incoming vehicles for firewood.	Random checking of 10–20% of incoming vehicles for firewood, adult transport?	Random checking of 20–30% of incoming vehicles for firewood, adult transport?
Sapling Stewardship	Program continued IF DESIRED	Continuation of current program	Program expanded to also include planted trees. Particular attention to saplings likely to be released when surrounding ash trees are removed or topped.	Program expanded to also include planted trees. Particular attention to saplings likely to be released when surrounding ash trees are removed or topped.	Program expanded to also include planted trees. Particular attention to saplings likely to be released when surrounding ash trees are removed or topped.
Site and Tree Crew Actions	Normal	Hazard removal. Removal of unhealty ash trees and trees with trunk and large limb damage. Some ash topping.	Ash topping or removal as in Alt 2, but increased to facilitate sapling growth to the extent necessary to accomplish Woodland Shaping goals.	Ash topping or removal as in Alternative 2	Ash topping or removal as in Alt 2, but increased to facilitate sapling growth to the extent necessary to accomplish Woodland Shaping goals.
Ash Tree Innoculation	NONE	3–5 demonstration trees accompanied with substantial outreach/ public displays.	**Experimental** inoculation of 5–10 designated trees determined by selection criteria.	Inoculation of 100 Tier 1 trees as determined by selection criteria. Coordination with future Woodland Shaping goals (i.e., ash topping/removal is intended to open canopy for non-ash recruitment, so inoculation to save ash canopy should not conflict with Shaping goals).	Innoculation of 100 Tier 1 trees as determined by selection criteria. Coordination with future Woodland Shaping goals (i.e., ash topping/removal is intended to open canopy for non-ash recruitment, so inoculation to save ash canopy should not conflict with Shaping goals).
Woodland Shaping	NONE — Let nature take its course.	1–2 sites (Eight + campsite) to serve as a demonstration of what ash topping or removal would look like to encourage growth of existing non-ash saplings and/or newly planted trees.	5–10 sites in public Fair area, 10–20 sites in camping areas.	Some trees removed as identified in inventory, but less emphasis on Woodland Shaping then in Alternative 3.	10 sites in public Fair area, 20 sites in camping areas.
Understory Planting	NONE — Let nature take its course.	5–10 mixed hardwoods in public areas.	20+ mixed hardwoods in public areas, 20+ in camping areas.	Priority planting locations identified in coordination with the ash inventory and phased removal strategy.	30+ mixed hardwoods in public areas, 30+ in camping areas.
Forest Stewardship Coordination	Normal	Increased coordination, especially with campsite and public area demonstration site.	Expanded coordination, especially with campsite and public area demonstration site.	Not specified, but assumed to be substantial in areas with designated Tier I trees.	Expanded coordination, especially with campsite and public area demonstration site.
Fair Family Outreach/ Communication	Minimal: Let nature take its course.	Substantial. Increased outreach and public displays at demonstration sites. Demonstration sites designated as passport destinations.	Substantial, both w/respect to felling/topping of ash at woodland shaping sites and w/respect to experimental inoculations.	Very substantial due to potential misinformation w/re to safety of pesticide use on Fairgrounds.	Very substantial, both w/respect to felling/topping of ash at woodland shaping sites and w/respect to inoculation safety issues.
LIKELY CONSEQUENCES	For this year, no consequences. Missed opportunity for more substantail feedback from Fair Family re. possible effects of EAB damage to ash canopy.	Some pushback on inoculation and tree removal, but good opportunity to elicit more active involvement of Fair Family due to the impact of viewing actual response scenarios.	Likely substantial pushback on felling or topping healty ash trees in order to facilitate growth of future non-ash canopy trees.	Inoculation of large number of trees with pesticides likely to elicit substantial pushback regardless of alledged non-target effects. Substantial outreach will be necessary.	Inoculation of large number of trees with pesticides likely to elicit substantial pushback regardless of alledged non-target effects. Substantial outreach will be necessary. In addition, substantial pushback likely w/re to felling or topping healty ash trees in order to facilitate growth of future non-ash canopy trees.

2027 Alternatives Exercise: (1) No Action (2) Potential Actions Demonstrations (3) Moderate Proaction — Woodland Shaping Focus (4) Inoculation Focus (5) Substantial Proaction — Woodland Shaping & Inoculation. For the complete Excel workbook, see https://docs.google.com/spreadsheets/d/1-8uzcHpQ6tPTq-io7SeUhydOryg6Xyke/edit?usp=sharing&ouid=101628967194018175166&rtpof=true&sd=true

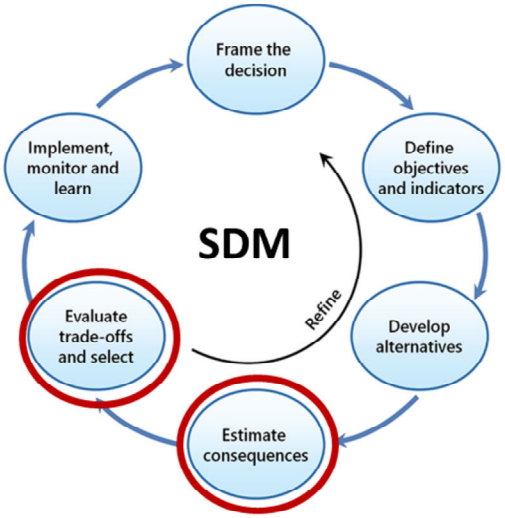


Potential Alternatives for 2027 Fair Season

EMERALD ASH BORER RESPONSE AT OREGON COUNTRY FAIR — for 2027 IMPLEMENTATION

ALTERNATIVES → ACTIONS ↓	ALTERNATIVE 2 POTENTIAL ACTIONS DEMONSTRATIONS	ALTERNATIVE 3 MODERATE PROACTION WOODLAND SHAPING FOCUS	ALTERNATIVE 4 INOCULATION FOCUS (Alexis & Todd's Proposal to LUMP)
Ash Tree Innoculatio	3–5 demonstration trees accompanied with substantial outreach/ public displays.	**Experimental** inoculation of 5–10 designated trees determined by selection criteria.	Inoculation of 100 Tier 1 trees as determined by selection criteria. Coordination with future Woodland Shaping goals (i.e., ash topping/removal is intended to open canopy for non-ash recruitment, so inoculation to save ash canopy should not conflict with Shaping goals).
Woodland Shaping	1–2 sites (Eight + campsite) to serve as a demonstration of what ash topping or removal would look like to encourage growth of existing non-ash saplings and/or newly planted trees.	5–10 sites in public Fair area, 10–20 sites in camping areas.	Some trees removed as identified in inventory, but less emphasis on Woodland Shaping then in Alternative 3.
Understory Planting	5–10 mixed hardwoods in public areas.	20+ mixed hardwoods in public areas, 20+ in camping areas.	Priority planting locations identified in coordination with the ash inventory and phased removal strategy.

Estimating Consequences and Trade-offs



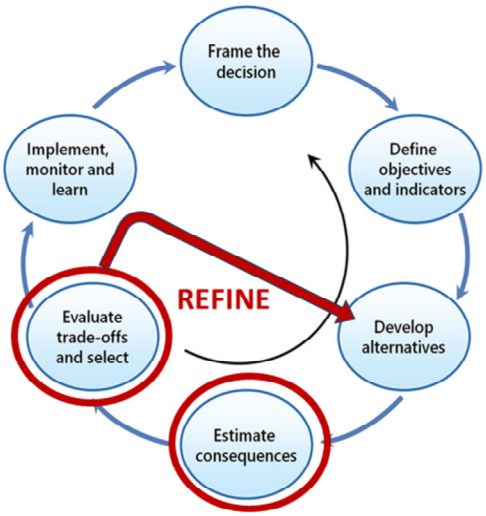
How can we decide which course of action best aligns with the values we thought were important when we first framed the nature of the problem we were facing?

- By assigning metrics to each of the value-based Objectives identified earlier, the fundamental values then become the criteria by which we can evaluate competing alternative solutions.
- Once metrics have been normalized, the resulting **Consequence Table** provides a tool by which we can visualize a Preferred Alternative (as measured by our values) and potential trade-offs with other alternative solutions.



Consequence Table — 2027 Alternatives

CONSEQUENCE TABLE — 2027 EMERALD ASH BORER RESPONSE AT OREGON COUNTRY FAIR		AVG	SD	AVG	SD	AVG	SD	AVG	SD	AVG	SD
OBJECTIVES (CRITERIA)	Weight	ALTERNATIVE 1 NO ACTION		ALTERNATIVE 2 DEMONSTRATION AREAS		ALTERNATIVE 3 WOODLAND SHAPING		ALTERNATIVE 4 INOCULATION		ALTERNATIVE 5 SUBSTANTIAL PROACTION	
SOCIAL VALUES: Nourish & sustain the Fair Family and Community											
Maximize transparent decision and implementation process with Fair Family	1	1.00	0.00	3.67	1.58	3.89	0.60	2.67	1.32	2.50	1.41
Maximize agreement across diversity of perspectives	1	1.22	0.67	3.56	1.59	4.00	0.87	2.11	0.93	2.13	1.46
Maximize match with Seven Generations vision	1	1.50	0.93	3.00	1.51	3.88	1.25	2.63	1.51	2.71	1.60
Maximize protection of cultural resources	1	3.22	1.92	3.56	1.67	3.56	0.73	4.00	1.32	3.13	1.55
Maximize outreach and education to Fairgoers and Fair Family	1	1.33	0.71	3.78	1.48	4.11	0.60	3.33	1.66	3.25	1.98
Maximize positive communication and shared actions with neighbors (e.g., landowners, municipalities)	1	1.11	0.33	3.33	1.50	3.67	1.41	3.22	1.48	3.13	1.64
LAND STEWARDSHIP VALUES: Maintain health & integrity of OCF landscapes [woodlands]											
Manage to match ecological capacity based on a climate-smart future informed by the past	1	1.00	0.00	2.89	1.54	4.00	1.00	3.33	1.66	3.75	1.75
Maximize diversity of climate resilient native trees	1	1.00	0.00	2.44	1.67	4.11	1.17	3.22	1.64	3.88	1.81
Minimize human footprint on healthy environment	1	1.67	1.41	3.33	1.58	3.22	1.39	2.78	1.30	2.50	1.41
Maximize match with OCF carbon-neutral initiative	1	2.25	1.83	3.13	1.36	3.50	1.20	3.63	1.51	4.00	1.73
Maximize wetland stabilization	1	1.89	1.45	3.00	1.41	3.67	1.66	3.22	1.56	3.38	1.69
Maximize credibility through science-based planning and monitoring	1	1.22	0.67	3.56	1.51	4.00	1.00	3.56	1.67	3.50	1.85
OPERATIONAL VALUES: Create a forward-looking, resilient, and achievable plan											
Maximize continued annual operation of Fair on site	1	1.00	0.00	2.89	1.69	3.78	1.09	3.56	1.59	3.88	1.81
Maximize Fairgoer safety	1	1.00	0.00	2.89	1.69	3.67	1.12	3.33	1.50	3.75	1.75
Maximize usable Fair space	1	1.00	0.00	2.89	1.54	3.78	1.09	3.56	1.33	4.00	1.60
Maximize shade in current shaded areas	1	1.44	1.33	2.89	1.76	3.67	1.41	3.56	1.59	3.38	1.60
Meet all relevant federal and state requirements	1	3.00	2.00	3.44	1.74	3.78	1.64	3.11	1.83	2.88	2.03
Maximize plan logevity & adaptability	1	1.33	0.71	3.44	1.51	4.11	1.05	3.33	1.58	3.75	1.83
Maximize integration with previous OCF plans (e.g., LUMP Manual, Upland Forest Plan)	1	2.00	1.73	3.33	1.50	3.67	1.22	2.44	1.24	2.63	1.41
Minimize costs (short- & long-term)	1	2.56	1.94	3.33	1.66	3.33	1.41	2.89	1.54	2.75	1.98
TOTALS —>		**3.33**	1.22	**6.78**	1.50	**7.78**	1.14	**5.78**	1.41	**6.38**	1.62

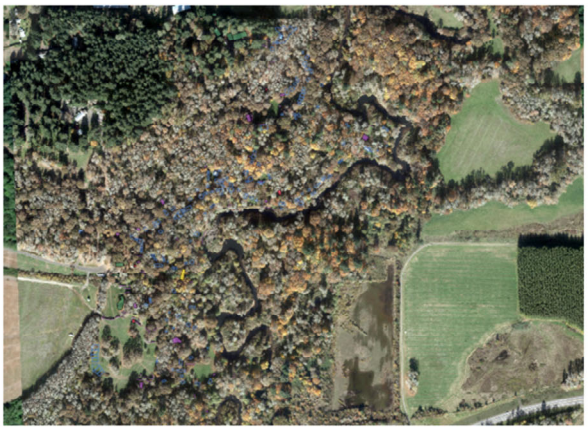


SDM is an Iterative Process !

After discussing the Consequence Table, the team decided to refine the Preferred Alternative. Divergent opinions regarding how much emphasis there should be for the inoculation and woodland shaping actions remain to be resolved.

Landscape Framework

ecological and operations



ASH CANOPY

> 90% Ash

75-90% Ash

25-75% Ash

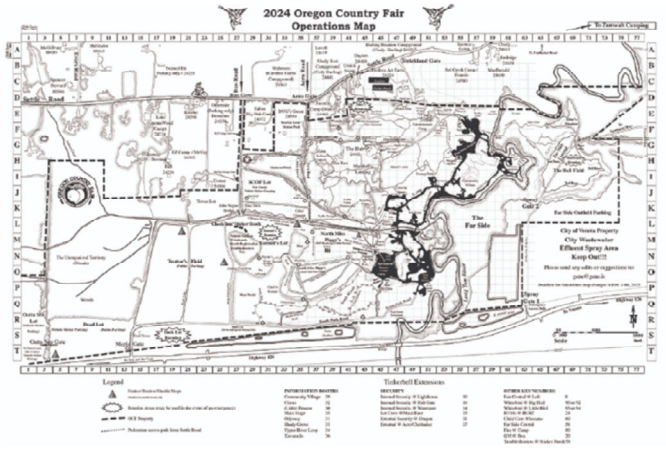
< 25% Ash

Plan will present a set of portfolios of alternative actions that meet the Fairs woodland stewardship needs based on our unique landscape framework where ecological conditions and opportunities interface with operational needs and limitations.

CHALLENGE: GIS DATA NEEDS

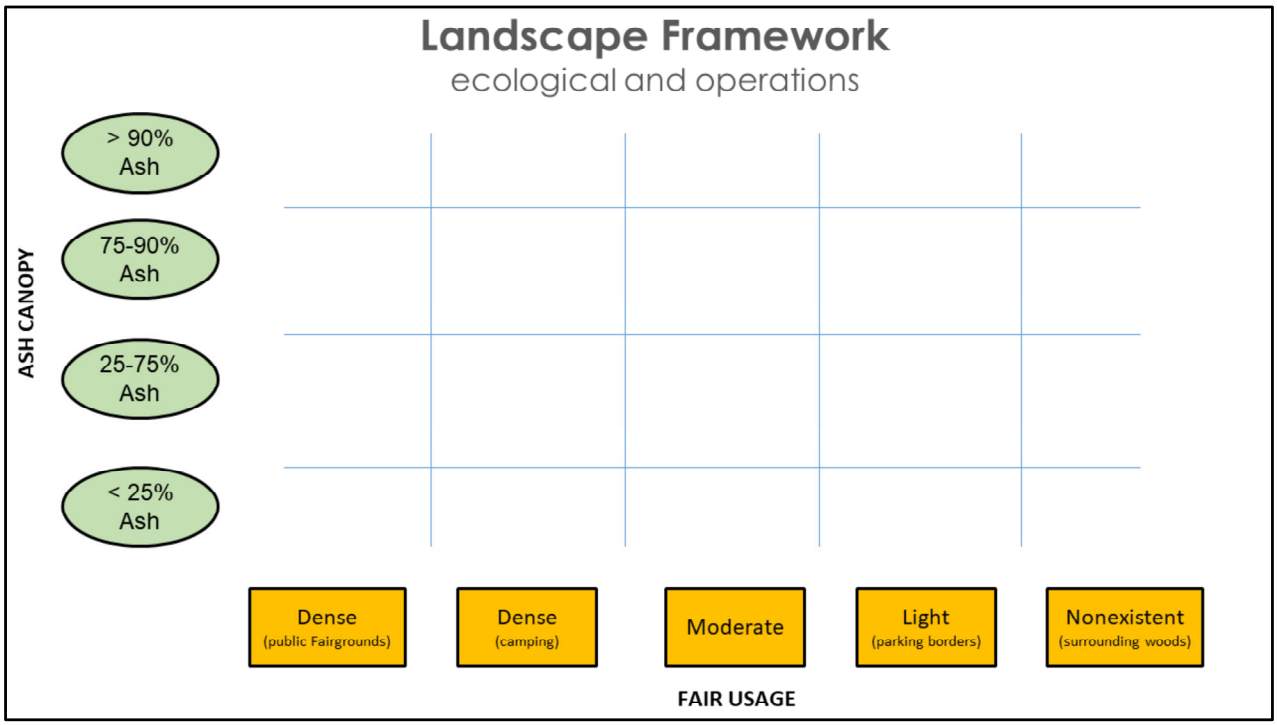
Landscape Framework

ecological and operations

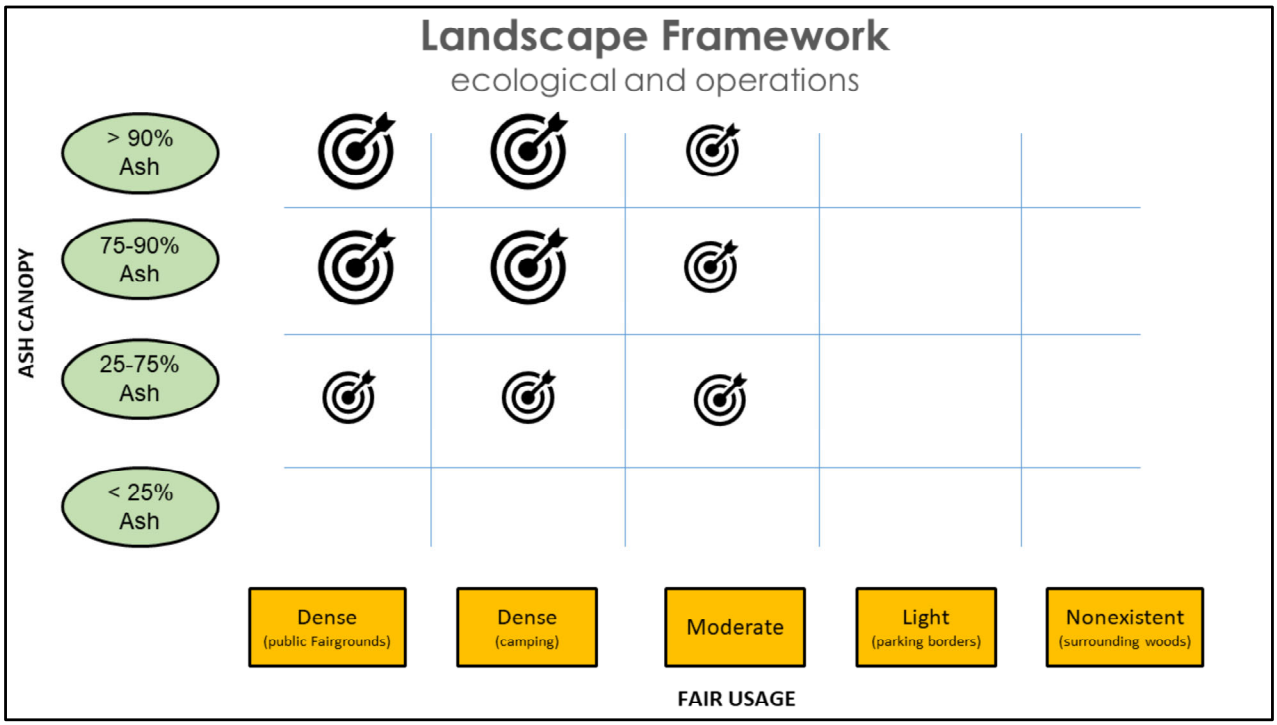


FAIR USAGE

Dense (public Fairgrounds)	Dense (camping)	Moderate	Light (parking borders)	Nonexistent (surrounding woods)



CHALLENGE: GIS DATA NEEDS



Identify woodland stewardship units and related site-specific action/strategies

CHALLENGE: GIS DATA NEEDS

2027: CURRENT ACTIONS (double down)

- Education (increase public comment)
- Forest Stewardship Coordination
- EAB Prevention
- Sapling Stewardship
- Opportunistic Removal
- EAB Monitoring
- Initial mapping
- Complete 5-10 year plan

2027: NEW ENABLING ACTIONS

- Complete 5-10 year response plan
- Funding/fundraising plan
- Hire ecological forester
- Professional cultivation/planting plan
- Data consolidation
- GIS Map (based on Ash Canopy x Fair Usage)
- Data acquisition, monitoring, and data management plan
- Community/partner/neighbor outreach plan
- Demonstration sites?

5-10 YEAR PLAN (10-30 YEAR OUTCOMES)

Inoculation strategy

Woodland management strategy (canopy transition)

Clear objectives, alternatives, predicted outcomes (comparable)

- Why?
- Where?
- How much?
- When?

INOCULATION STRATEGY

Actions

- Education 1st
- Shade, functionality -- high traffic, high use, booths, venders
- Mosaic/clusters (Herd immunity) -- Riparian stability and cooling
- Mosaic/clusters (Herd immunity) -- relic ash stands
- Mosaic/clusters (Herd immunity) -- stave off need to remove trees
- 5-10 year planning
- Monitoring
- Costs

Alternatives

ALTERNATIVE 1 -- No action

ALTERNATIVE 2 -- Less inoculation (triggered)

- Education 1st
- High-priority trees focus
- High value mosaics/clusters
- 5-10 years -- triggered action

ALTERNATIVE 3 -- Less inoculation (immediate)

- Education 1st
- High-priority trees focus
- High value mosaics/clusters
- 5-10 years -- 2028 Action

ALTERNATIVE 4 -- More inoculation (triggered)

- Education 1st
- Arborist proposal
- 5-10 years -- triggered action

ALTERNATIVE 4 -- More inoculation (immediate)

- Education 1st
- Arborist proposal
- 5-10 years – 2028 action

What percent of Oregon Ash trees do we want inoculate:

- In next 4 years?
- When EAB is detected with 25 miles of fair?
- When EAB is detected a fair site?
- When EAB canopy effects are apparent?

FOCUS ON DENSE FAIR USAGE WOODLANDS

CANOPY MANAGEMENT STRATEGY

Actions

- Education 1st
- Opportunistic removal
- Canopy opening / Sapling release
- Woodland shaping (33, 33, 33%)
- Non-ash canopy enhancement
- Oak restoration
- Monitoring
- Costs

Alternatives

ALTERNATIVE 1 -- No Action

ALTERNATIVE 2 Slow ramp up (triggered)

- Education 1st
- Demonstration sites
- 5-10 years -- triggered ramp up (slow)

ALTERNATIVE 3 -- Slow ramp up (immediate)

- Education 1st
- Demonstration sites
- 5-10 years – Fast ramp up (slow)

ALTERNATIVE 4 -- Fast ramp up (triggered)

- Education 1st
- Demonstration sites
- 5-10 years -- triggered ramp up (fast)

ALTERNATIVE 5 -- Fast ramp up (immediate)

- Education 1st
- Demonstration sites
- 5-10 years -- scheduled ramp up (fast)

What percent of Oregon Ash trees do we want removed:

- In next 4 years?
- When EAB is detected with 25 miles of fair?
- When EAB is detected a fair site?
- When EAB canopy effects are apparent?

FOCUS ON DENSE FAIR USAGE WOODLANDS

QUESTION/DISCUSSION
BOARD MEMBERS AND FAMILY

2027 EAB RESPONSE PLAN MATERIALS

Board Work Session -- Monday November 16, 2026

https://drive.google.com/drive/folders/1xQv2Jl12GeByAHHcx8Qbbb6RmWNjA7N2?usp=drive_link