The characteristic D-shaped emergence hole left behind by the adult stage of emerald ash borer on a green ash tree.

The City of Whitewater Emerald Ash Borer Management Plan

City of Whitewater
Emerald Ash Borer
Management Plan

Signatures to Emerald Ash Borer Management Plan:

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Kevin Brunner
City Manager

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City Council

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Chuck Nass
City Forester

Developed by the City of Whitewater Department of Public Works, and Parks and Recreation

Executive Summary

This plan was developed by the of City of Whitewater Department of Public Works and Parks and Recreation Divisions, with the assistance and feedback of Wisconsin Department of Natural Resources (DNR), Dane County's Emerald Ash Borer plan, and Department of Agriculture Trade and Consumer Protection (DATCP). The plan seeks to take the challenges posed by the Emerald Ash Borer (EAB) and find the best actions to take, to help our community to recover from the devastation left from the insect, with as little financial impact as possible.

This plan consolidates essential information within one accessible and user-friendly, reference document. In order to empower our community to prepare for the onset of the EAB, this document contains some historical background of the EAB, and what Beloit has been doing to gain knowledge of EAB. This knowledge will expedite the identification of the insect and options for what can be done with infested wood. The three main goals of our plan are:

1. Reduce the Environmental Impacts of the EAB
2. Mitigate the Potential Economic and Social Costs Associated with Emerald Ash Borer Control Efforts and Damage
3. Establish opportunities to put wood formerly considered wood waste to a positive and profitable use

The City of Whitewater has completed an inventory of all terrace and park trees, and continues to identify trees at risk. With our research, we have found that The City of Whitewater, alone, or in cooperation with the private sector, is well-positioned to handle the increase of wood volumes; that the EAB, is likely to produce. In the case of an unexpected increase of wood, whether it is EAB, a natural disaster (tornado), or manmade disaster; this plan can be utilized to deal with that wood waste.

Our knowledge of the Emerald Ash Borer management is constantly changing, as we gain experience of how to contain, hopefully eradicate, this invasive beetle, as new research is conducted. Accordingly, this plan must be updated as research dictates.

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Introduction

In August of 2008 the first sighting of EAB in Wisconsin was confirmed in Ozaukee County. While control and containment has been the main focus of DNR and DATCP it seems highly likely that the residents of Whitewater and City Officials will be faced with the beetle in the near future. Judging on how the spread progressed in Illinois and the movement we have seen in Wisconsin it is believed the beetle will be introducing itself in Whitewater within the next five years, unless the pest is here and undetectable. Every Ash tree in the City is susceptible to the EAB infestation and mortality.

The City of Whitewater's Emerald Ash Borer and Wood Utilization Plan will provide a brief overview of the history of the EAB in North America including background on Wisconsin proactive EAB management efforts and lessons learned from infested communities. Because public education and local monitoring by both residents and City Employees are a critical element of proactive management, information on ash tree identification, signs and symptoms of EAB and EAB identification are included. This plan provides information for when EAB is detected and wood utilization. It will provide who and why quarantine areas are set up, where wood can be moved and potential wood utilization options for trees affected with EAB.

Scope

Wisconsin Department of Natural Resources and Department of Agriculture Trade and Consumer Protection have invested a great deal of time and resources in planning for the arrival of the Emerald Ash Borer in our state over the last three years. DNR Emerald Ash Borer and Wood Utilization Strategic Management Plans are intended to assist the City and residents to take advantage of the State's Plan and any resources available. The city has identified tree locations and condition of ash trees on the terrace, local sites and options for wood utilization, local contacts and wood processors in the area that are available through the DNR.

Management and Planning

In August 2007, the Secretaries of DATCP and DNR signed a joint letter outlining the state EAB Program organizational structure and how this structure will function. The structure provides coordination, oversight and direction to the state's interagency preparations for the arrival of and eventual response to EAB. Prior to the development of this structure, the partners were informally coordinating efforts.
The EAB Program structure consists of a six-person Advisory Group made up of managers from DATCP, DNR, University of Wisconsin, UW-Extension, USDA-APHIS and USDA-Forest Service. The Advisory Group sponsors three working groups: Communication and Outreach, Operations, and the Science Panel. These groups have specific charges and assignments and provide input and recommendations to the Advisory Group. In addition, an interagency team, led by DNR is drafting a comprehensive management plan that will extend beyond the initial response laid out in this plan

Planning Process

- In 2008 as part of the planning process the City of Whitewater received a grant from DNR to complete a tree inventory. Geographic Positioning System (GPS) locations were used for every tree and entered in to the cities Geographic Information System (GIS) database compatible with City Works Software.

- The City of Whitewater received the EAB tool kit and training at the annual state conference.

- The City Forester went on the EAB bus trip to Illinois for background training.

- The City Forester visited Newburg for the first infestation in Wisconsin

- Various wood utilization options have been researched for future use.

- Baseline criteria has been established for the selection of potential wood utilization yards capable of serving as collection and process sites for EAB affected trees.

- A draft plan of the Emerald Ash Borer and Wood Utilization Strategic Management Plan will be submitted to the Department of Natural Resources (DNR) and Department of Agriculture Trade and Consumer Protection (DATCP) for their review upon approval of this plan.

- Although there is no funding from the state or federal agencies at this time the City will continue to look for other funding resources to assist in the tremendous cost involved for removal of the Ash trees and replacement plantings.

- The City will continue it relationship with the Department of Natural Resources (DNR) and Department of Agriculture Trade and Consumer Protection (DATCP) for assistance in any and all wood utilization resources available in the state.

- The City of Whitewater will work with the Department of Natural Resources and use their response plan and guide lines once EAB has been found.

Goals, Priorities, and Actions

The purpose of this plan is to give residents and local officials the tools needed to meet the challenges posed by the EAB in a constructive, environmentally correct economical manner. Whitewater's Emerald Ash Borer and Wood Utilization Strategic Management Plan were developed with the following goals in mind:

1. Reduce the Environmental Impacts of the EAB.
2. Mitigate the Potential Economic and Social Costs Associated with Emerald Ash Borer Control Efforts and Damage.
3. Establish opportunities to put wood formerly considered wood waste to a positive and profitable use.

Priorities and Actions

The plans foremost priority is the reduction of the EAB's detrimental effects within the city and recognizes that environmental, social and economic impact will overlap in significant ways. While the plan focuses on preparation of the arrival of the emerald ash borer in Whitewater, it also looks beyond this critical issue to facilitate new ways of reclaiming wood in the coming years.

Goal #1:
Reduce the environmental impacts of the EAB

Priorities:

- Prevent and /or delay the arrival of EAB.
- Endorse appropriate and up to date EAB management options.
- Encourage wood utilization practices that avoid the spread of EAB.
- Promote residents awareness and knowledge of the EAB and other invasive pests and the damaging effects they have on our urban forest.

Proposed Actions:

- Stay current and up to date regarding EAB research and best management recommendations and share with residents and appropriate city officials.
- Develop and facilitate public education on how EAB is spread in partnership with DNR and DATCP.
- Empower the citizens of Whitewater to monitor for EAB presence
- Provide the forestry workgroup with the tools, education and resources for detection of EAB.
- Develop an EAB ordinance for the City of Whitewater with the assistance from DNR and DATCP.
- Post updates of the EAB on the City's web page.

Goal #2:
Mitigate the potential economic and social costs associated with Emerald Ash Borer control efforts and damage

Priorities:

- Complete tree inventory and EAB response plan.
- Identify potential EAB Wood Utilization Yard sites.
- Locate all Ash trees on the terrace.

Proposed Actions:

- Educate public on treatments available for Ash trees in their yards.
- Explore options for treating terrace and parks trees.
- Remove Ash trees with crown die back and inspect for EAB.

- Evaluate and locate potential Wood Utilization Yard sites in a way that both city and homeowners may deliver wood waste to site.
- Explore options for funding EAB control actions and share that information with the public.
- Continue involvement with the Urban Forestry Commission, EAB Wood Utilization Committee and continual communication with DNR so The City of Whitewater has the most up to date information.

Goal #3:
Establish opportunities to put wood formerly considered wood waste to a positive and profitable use

Priorities:

- Develop partnerships with wood users in southern Wisconsin/Northern Illinois.
- Investigate the requirements for wood utilization operations to include but not limited to: equipment, maintenance, staffing and management, and leased or contracted services.

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Proposed Actions:

- Explore and develop wood utilization options for small or large scale.
- Investigate and determine partnerships with biofuel users.

Historical Background

The emerald ash borer is a native to China, Japan and other areas in eastern Asia. It is speculated that the insect traveled from Asia to southeastern Michigan unintentionally, concealed in solid wood packing, such as pallets, or crates routinely used in international cargo shipments. The presence of EAB was discovered in Detroit in 2002, and the insect had already been well established in the area, meeting infestation levels. It is believed that the insect had been present for up to twelve years before detected.

In Asia the trees built up a co-evolutionary resistance to the EAB with pathogens and natural predators. In North America we have a few natural predators, one of which is the North American Wood Pecker. The wood pecker will consume the larva of the EAB, but has only a small impact on the population, and mainly serves as a detection tool. The flight of the EAB is from June to August, and it is believed they can only fly a few miles per year. Human activity, such as moving fire wood for burning, or transplanting nursery stock can transport the beetle much further than the beetle could ever fly.

In the Detroit area alone, over 15 million ash trees have been infected with EAB. EAB has been found in Michigan, Ohio, south Ontario, Maryland, Pennsylvania, Virginia, West Virginia, Illinois, and now in a number of communities in Wisconsin. Businesses such as nurseries, wood mills and fire wood producers have been impacted by the ever growing quarantine restrictions put in place to slow the spread of EAB.

EAB Planning Efforts in Wisconsin

The EAB only attack the native Ash trees including as the green, white, black and blue ash trees. Research has found that the beetles target trees in sunny areas, borer into the tree and the larvae feeds vascular tissue located directly beneath the bark. As they feed they create distinctive S-shape tunnels and critically disrupt the trees ability to circulate water and nutrients.

The summer of 2004 DNR started collecting data of the number of ash trees in Wisconsin and their condition. Over the last five years DNR and DATCP have joined forces to control ash trees entering Wisconsin and conduct numerous public education sessions. Purple traps were hung in trees for detection through out the state and 700 detection trees in 29 counties were felled and examined in 2008.

EAB Planning Efforts in Whitewater

2007: DATCP performed tests in the spring, on detection trees around the City of Whitewater. These tests were performed on trees that were already under stress by removing the bark exposing the cambium inviting any Emerald Ash Beetle in the area to infect the tree. Early summer, city staff attended a workshop in Illinois to see an actual infestation in one of their parks and was able to see the actual bug and larva. In the fall all trees were cut down and the remainder of the bark was removed and inspected for any trace of the beetle or the larvae. None were found.

EAB Detection Tree

2008: The first EAB was found in Wisconsin on a grove of dying Ash in a rural area of Ozaukee County. The City Forester went to observe the removal and disposal of the wood.

2009: The summer of 2009 the City had completed an inventory of tree on the terrace and parks. At present the City of Whitewater has 621 ash trees on the terrace and 140 in the parks. The DNR and DATCP estimate that it costs approximately $340 to remove an average sized (12" diameter) street ash tree. The cost to remove a yard tree averages around $375. These costs tend to be more on private property due to accessibility issues. In the long-run, the tree inventory will give the community the information needed to make decisions that promote community forest health and protect your investments. Fall of 2010 the development of the Emerald Ash Borer Management Plan was completed for review.

Wood Utilization Yards

The City of Whitewater has identified and evaluated one potential Wood Utilization Yard site. Designating such sites enables the city to handle "surges" in wood residue volume following widespread infestations and damaging storms. In addition, these sites would facilitate the recycling and utilization of wood residue in an efficient and orderly manner. The City of Whitewater is considering the following issues and options related to the establishment of Wood Utilization Yards:

- In order to ensure that yards are easily and equitably accessible—and to reduce the risk of spreading the EAB within the City of Whitewater—the establishment of a Wood Utilization Yard is necessary. The proposed site is the City Compost Site (at the end of N. Jefferson Street).

- Wood Utilization Yard may need to be operated on a rotating schedule, and adjusted in response to local need. A timetable will be developed based on the need for chipping that assigns specific dates of operation. The site will allow costly equipment to be shared and will notify adjacent property owners when to expect increased activity at the site.

- In order to prevent misuse in the form of inappropriate dumping and the removal of materials, the Wood Utilization Yards must be secured. Fencing, signage, and/or regular staffing may be required.

- Although City of Whitewater would like to offer wood residue disposal free of charge and/or to reimburse users for the costs of hauling materials to the site, there is at present no funding for yard operation. If a tipping fee must be charged to cover the costs of yard operation, a fee schedule must be set up as soon as possible.

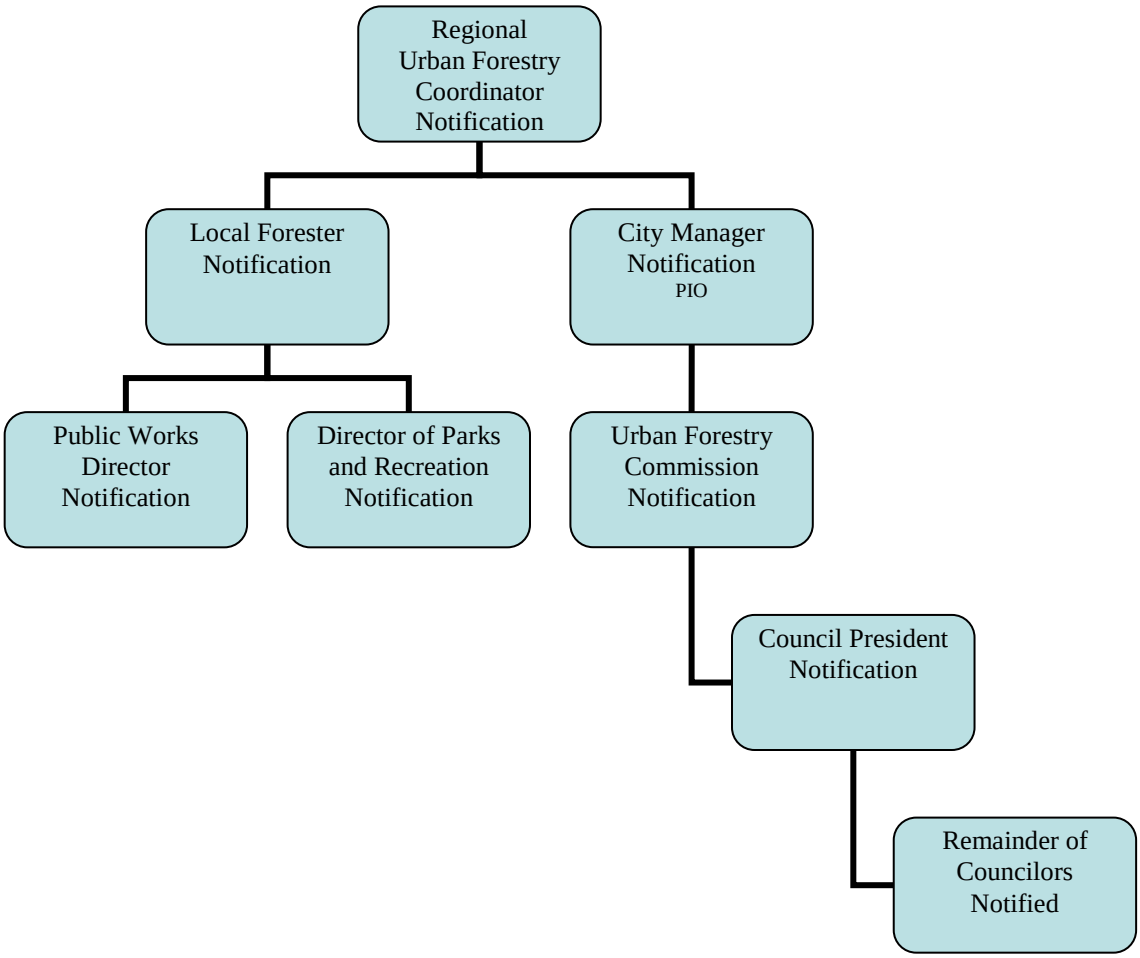
City of Whitewater
Compost Site

States Notification System

There are a number of ways in which the first emerald ash borer may be discovered in Whitewater. It may be noticed by nursery personnel, a homeowner, or as part of a survey. Regardless of who makes the discovery, the first find must be confirmed by the USDA-APHIS-PPQ laboratory in Brighton, Michigan. Additionally, any new finds in previously non-infested counties must also be confirmed in that lab or by a specialist with WI DATCP. Subsequent specimens may be confirmed by entomologists at the UW-Madison, DNR, DATCP, USDA-Forest Service or USDA-APHIS-PPQ.

Following positive identification of the first or subsequent sample, notification of a variety of individuals must occur prior to the general release of the information. Appropriate agency managers and core staff will be among those who are notified early in the response. Others who will be receiving advanced notification will include local, state and federal lawmakers and elected officials, agency staff with associated responsibilities, stakeholder and partner groups, and property owners or managers where the finds occur.

City of Whitewater's Notification System



State Implemented Response Structure for the City of Whitewater Command System

An outbreak of EAB has local, state, national and international impact. Because of the threat to other states and Canada, there will be a joint response to the infestation using local, state and federal authorities and resources, and managed using the Incident Command System (ICS), with Unified Command established at the onset of the response. Unified Command is a team effort, allowing all agencies with responsibility for an incident to establish a common set of incident objectives and strategies. This is accomplished without losing or abdicating agency authority, responsibility or accountability.

In addition to the ICS Response Organization, the EAB Advisory Group(members of USDA-APHIS, USDA National Forest System, DATCAP, DNR, University of Wisconsin) will review and offer advice on action strategies, recommend research, public outreach objectives and support funding initiatives. This group possesses the scientific expertise, legal authority and program responsibility to evaluate and recommend changes in the response actions those not covered in the plan. The Advisory Group will help resolve issues not easily addressed by any individual involved in the ICS Response Organization.

ICS Response Organization

This organization will manage an EAB outbreak by coordinating all activities at the state level. The organization will develop and implement the response plan, gather and assess data, support or conduct investigations, and manage all state aspects of investigative and response functions. Communications activities will be part of the response organization's responsibilities.

DATCP and DNR will develop and assign positions, using ICS. In the field, the assigned Incident Commanders (IC) will manage all response operations in an infested area.

The ICS Response Organization, under the direction of the IC, will organize workforce activities and other resources. Workforce organization will reflect the needs of the event, including staff assignments for operations, finance, logistics, communications, records, and other needs.

Most of the command staff positions will be filled with representatives from DATCP, DNR and USDA-APHIS. Depending on the location and nature of the response, it is likely that local and tribal representatives will be part of the incident command structure, and may indeed hold command staff positions.

Responsibilities Based on Authorities

The following chart applies to private and public lands. Lands that are generally NOT covered here include tribal and federal land. Federal lands are specifically the responsibility of federal agencies. DATCP may work on federal lands under a cooperative agreement. Each tribal government has the autonomy to determine its own plan of action. Work remains to engage each of the tribe's representatives and federal landowners to determine whether, or how, each would like to proceed on EAB activities. Each group listed in the following chart has responsibilities that are based on federal law, state statute or administrative rule (see following page) with respect to EAB. Some activities are agency specific, while others are shared across agencies. Moreover, one agency may have the authority for specific actions, but another agency may, at times, have the resources to conduct the work more efficiently. A Memorandum of Understanding (MOU) between DNR and DATCP will help to sort out some overlapping duties.

Government or Organization	Detection	Regulation	Control	Communication
USDA – APHIS	Technical support and funding. Official identification.	Quarantine. Interstate movement. Emergency action notification. Compliance agreement.	Assist with containment.	Participate in activities with other agencies and affected groups. Printed materials.
USDA- FS National Forest System		Restriction of movement of firewood onto national forest land.	May assist with implementation.	
USDA-FS State and Private Forestry	On all federally owned land. Technical support and funding.		Assist with management.	Participate in activities with other agencies and affected groups. Printed materials.
DATCP	On all properties, private and public.	Quarantine. Intrastate movement. Holding and destruction orders.	Delimitation survey. Control and containment. Contracting services.	Notify and coordinate activities with other agencies and affected groups. Press releases and other printed materials.
DNR	On non-federal forest lands. This excludes urban forests, which will be coordinated by DATCP.	On land owned or managed by DNR, they may regulate users, including their use and possession of firewood.	Development of management recommendations in cooperation with other state and federal agencies.	Coordinate activities with other agencies and affected groups. Press releases and other printed materials.

Univ. of Wisconsin	On university property and other by permission.			Printed materials and established professional networks in counties and communities

Insecticide Options for Protecting Ash Trees from Emerald Ash Borer

There are Chemical Treatment options that may be looked at for protecting ash trees from E.A.B. It should be noted however, that Chemical Treatment carries with it trade-offs, that may not be environmentally safe. Caution should be exercised and all product information should be reviewed before product treatment is done.

Table 1. Insecticide options for professionals and homeowners for controlling EAB that have been tested in multiple university trials. Some products may not be labeled for use in all states. Some of the listed products failed to protect ash trees when they were applied at labeled rates. Inclusion of a product in this table does not imply that it is endorsed by the authors or has been consistently effective for EAB control. See text for details regarding effectiveness.

Insecticide Formulation	Active Ingredient	Application Method	Recommended Timing
	Professional Use Products		
Merit® (75WP, 75WSP, 2F)	**Imidacloprid**	**Soil injection or drench**	**Mid-fall and/or mid to late spring**
Xytact™ (2F, 75WSP)	**Imidacloprid**	**Soil injection or drench**	**Mid-fall and/or mid to late spring**
IMA-jet®	**Imidacloprid**	**Trunk injection**	**Early May to mid June**
Imicide®	**Imidacloprid**	**Trunk injection**	**Early May to mid June**
Tree-age™	**Emamectin benzoate**	**Trunk injection**	**Early May to mid June**
Inject-A-Cide B®	**Bidrin**	**Trunk injection**	**Early May to mid June**
Safari™ (20 SG)	**Dinotefuran**	**Systemic bark spray**	**Early May to mid June**
Astro®	**Permethrin**	**Preventive bark and foliage cover sprays**	**2 applications at 4-week intervals; first spray should occur when black locust is blooming (early May in southern Ohio to early June in mid-Michigan)**
Onyx™	**Bifenthrin**		
Tempo®	**Cyfluthrin**		
Sevin® SL	**Carbaryl**		
	Homeowner Formulation		
Bayer Advanced Tree & Shrub	Imidacloprid	Soil drench	Mid-fall or mid to late spring

Key Points and Summary Recommendations

- Insecticides can effectively protect ash trees from EAB.

- Unnecessary insecticide applications waste money. If EAB has not been detected within 10-15 miles, your trees are at low risk. Be aware of the status of EAB in your location. Current maps of known EAB populations can be found at www.emeraldashborer.info. Remember, however, that once a county is quarantined, maps for that county are no longer updated.

- Trees that are already infested and showing signs of canopy decline when treatments are initiated may continue to decline in the first year after treatment, and then begin to show improvement in the second year due to time lag associated with vascular healing. Trees exhibiting more than 50 percent canopy decline are unlikely to recover even if treated.

- Emamectin benzoate is the only product tested to date that controls EAB for more than one year with a single application. It also provided a higher level of control than other products in side-by-side studies.

- Soil drenches and injections are most effective when made at the base of the trunk. Imidacloprid applications made in the spring or the fall have been shown to be equally effective.

- Soil injections should be no more than 2-4 inches deep, to avoid placing the insecticide beneath feeder roots.

- To facilitate uptake, systemic trunk and soil insecticides should be applied when the soil is moist but not saturated or excessively dry.

- Research and experience suggest that effectiveness of insecticides has been less consistent on larger trees. Research has not been conducted on trees larger than 25-inch DBH. When treating very large trees under high pest pressure, it may be necessary to consider combining two treatment strategies.

- Xytect™ soil treatments are labeled for application at a higher maximum rate than other imidacloprid formulations, and we recommend that trees larger than 15-inch DBH be treated using the highest labeled rate. Merit® imidacloprid formulations are not labeled for use at this higher rate. When treating larger trees with Merit® soil treatments, best results will be obtained with two applications per year. Imidacloprid formulations for homeowners (Bayer Advanced™ Tree and Shrub Insect Control and other generic formulations) can be applied only once per year.

- Homeowners wishing to protect trees larger than 15-inch DBH should consider having their trees professionally treated.

- Treatment programs must comply with any label restrictions on the amount of insecticide that can be applied per acre in a given year.

Applicable laws, statutes or administrative rules

Federal Regulations
Plant Pest Act 2000
7CFR 301.53 – 301.53-9 - EAB regulations 7CFR 319.40 -
Solid wood packing material

Wisconsin State Statutes
23.11 - General Powers
23.22 - Invasive Species
23.09(2)(h) - Conservation Cooperation
26.30 - Forest insects and diseases, department jurisdiction and procedure 26.97 - Law enforcement and police power
93.06(11) - Interagency Cooperation
94.01 - Plant inspection and pest control authority
94.02 - Abatement of pests
94.03 - Shipment of pests and biological control agents permits 94.10 - Nursery stock, inspection and licensing
94.46 - Stop sale, penalties, enforcement
94.67-94.7 15 - Wisconsin Pesticide Law

Wisconsin Administrative rules
ATCP 21 - Plant Inspection and Pest Control.
ATCP 21.17 - Emerald ash borer; import controls and quarantine
ATCP 21.20 - Relating to Voluntary Certification of Firewood Dealers
NR 35 - Zones of Infestation of Forest Pests
NR 45 - Use of Department Properties
NR 45.04(1)(g) - Regulation of firewood entering Department of Natural Resources lands

City of Whitewater Ordinance
(Will be entered when I get them)????

Public Policy

DATCP has developed two rules which have become law. Both are under ATCP 21 Plant Inspection and Pest Control. The first rule establishes import controls on plants, plant products, soils or other materials that are likely to harbor pests such as emerald ash borer, sudden oak death and Asian long horned beetles. The second, ATCP 21.20 Relating to Voluntary Certification of Firewood Dealers, allows for certification of firewood dealers and allows for the movement of non-infested firewood. Additionally, DNR developed a rule, NR 45.04(1) (g) Firewood Management on State Lands that states firewood that is certified by DATCP or originates within 50 miles of the camper's destination is allowed onto DNR-managed properties.

Mobilization and Early Response

Once there is an official confirmation of EAB in Whitewater, the States ICS Response Organization will be activated and the Operations Section will give guidance to number of immediate actions.

Regulation of Pathways to Prevent Spread

DATCP has the authority to issue a quarantine to restrict the movement of EAB and infested host material. The intent of quarantines is to slow the artificial (human assisted) movement of injurious pests. Federal quarantines are primarily focused on interstate movement and state quarantines are primarily focused on intrastate movement of regulated articles.

Federal regulations for EAB can be found in the Code of Federal Regulations at 7CFR301.53-1 through 9. The state regulations can be found in Wisconsin Administrative Code at ATCP 21.17. There are also several counties that have enacted ordinances that restrict the import of firewood onto county lands.

For practical purposes, quarantine areas need to be big enough that regulated articles can be processed in an orderly manner. The minimum level of quarantine will be at the county level. Additional surrounding counties may have to be quarantined in order for regulated articles, such as wood waste, to be processed without a significant cost increase to municipalities. Communication of regulatory initiatives to affected industries will take place.

The following entities will be affected by EAB quarantines:

Nurseries:
Nurseries in quarantined counties would not be allowed to move ash nursery stock to non- quarantined counties or states without inspection and certification. The instances where DATCP would certify ash nursery stock would be rare. Currently, most nurseries have already dramatically cut back on planting ash nursery stock because of the potential restrictions on its movement and also on the declining demand for ash, both in the public and private sector. Nurseries would be able to continue selling and transporting other, non-quarantined species.

Firewood Dealers:
Firewood movement would be severely limited in a quarantine situation; all hardwood firewood would be regulated as most people cannot distinguish ash from other species. Only businesses that are able to treat firewood to DATCP and federal standards to mitigate the spread of EAB would be certified and allowed to move wood out of quarantined areas.

Mills:
Mills would have restrictions placed on them as to handling of ash logs and the time of year they could process the logs for pulp or saw logs to minimize the risk of transport of EAB.

Local Permitted Tree Trimmers:
See Attachment **"**A**"**

Other potentially affected industries include pallet and waste product management facilities, landfills and waste transfer stations, wood-fired industrial boiler facilities, arborists and tree care companies. Municipal public works departments and property owners may also be impacted by quarantines.

Conduct a Delimiting Survey to Determine the Extent of the Infested Area

DNR and DATCP will conduct an intensive surveying of the immediate and surrounding area will be the first response to any EAB detection to delimit (determine the borders of an infestation) the extent of the infestation. This effort may include a variety of survey techniques such as tree climbers or bucket trucks, the felling and peeling of suspect trees, or a combination of these to determine the extent of the infested area.

Determining the number and distribution of infested ash trees helps to provide an initial assessment of the control efforts needed. Additionally, tracing the movement of potentially infested materials backward or forward may uncover the source of the infestation or reveal additional infestations elsewhere.

Develop a Results-based Plan of Action

Once the delimiting survey is complete, the Incident Commander (representatives from DNR or DATCP) will request that a plan of action be developed to minimize the spread of the EAB from the initial infestation site and to ensure the most appropriate management of the specific site. Mobilization of additional resources (i.e. public information officer, other agencies, laboratory analyses, and field/technical staff) and implementation of the ICS structure will ensue, ensuring a coordinated effort, including timely and effective communication, as well as a system for record-keeping and documentation.

Efforts will be made to determine the original source of the EAB infestation. This will help identify whether additional actions need to be taken to locate additional infestations or prevent further introductions of the pest.

Disposal and Utilization

Ash trees killed by EAB or those taken as part of a management plan may result in a significant number of trees. As a result, one of the largest challenges in EAB management projects is the disposal or utilization of ash material. Because quarantine regulations restrict the movement of ash material out of quarantined areas (with some exceptions), wood utilization becomes even more difficult. These restrictions may limit the ability to use this material as commercial landscape mulch, wood pulp chips and solid wood products (lumber, railroad ties).

One group of the ICS is the Operations Section which will focus on utilization issues. They will gather information regarding the location of potential utilization assets, such as biomass fuel users, firewood processors, tree care firms, sawmills, pulp mills, mulch manufacturers, and landfills.

The State and the City of Whitewater will continue to research new way to utilize ash wood and ash waste. For example, wood chips can be used as a bulking agent for sewage sludge composting or as feedstock for creation of pyrolysis oils. Pyrolysis oils can be used as heating oil, a carrier for creosote treating, or as a feedstock for the production of various wood chemicals and wood pellets.

Conclusion

The City of Whitewater's EAB management plan is intended to serve as a guide for local response to an EAB infestation. This local response will be conducted in accordance with best management practices, guidelines and regulations established by state and federal authorities. The urban forestry industry is developing more organic, less toxic responses to EAB which the City Forester is monitoring for possible future use. It is the intention of the City to work with the Federal, State and County agencies to dispose of and control the spread of EAB.

EAB Quarantine Counties & Approximate Locations of Infestation
WI DATCP / September 2009