

***South Dakota  
Emerald Ash Borer Readiness Plan***

*March 20, 2009*

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### **Introduction**

The emerald ash borer (EAB) is a new, significant threat to the urban and rural forests of South Dakota. First identified in 2002 in southeastern Michigan, this exotic beetle has destroyed millions of ash trees in southeast Michigan, and adjacent parts of Ohio and Ontario and Quebec, Canada. It has also been found in Illinois, Indiana, Maryland, West Virginia, Virginia, Pennsylvania, Ohio, Wisconsin, and Missouri. With state and federal quarantines in place, significant survey, containment and clean-up operations are underway in the affected areas. However, the main population core is well established. Hopefully, EAB will be contained in the present locations for a long time and movement to South Dakota can be delayed well into the future. However, there are concerns that containment and quarantine efforts will not be enough and the pest could come to South Dakota and surrounding states in infested firewood, logs or nursery stock.

The United States Department of Agriculture Forest Service (Appendix A or [http://www.na.fs.fed.us/spfo/pubs/pest\\_al/eab/eab.pdf](http://www.na.fs.fed.us/spfo/pubs/pest_al/eab/eab.pdf)) provides details on the identification, biology, hosts, and symptoms of the EAB in a Pest Alert. Although chemical and biological controls are under investigation, aggressive containment and eradication efforts are necessary for new outbreaks outside the core infestation.

South Dakota has a higher percentage of ash trees than any other state in the country. It is estimated by the South Dakota Department of Agriculture, Division of Resource Conservation and Forestry (RCF) that approximately 35-40% of public trees in South Dakota cities are green ash. In some communities, green ash comprises over 70% of the public trees. Preliminary data from the Great Plains Initiative inventory indicates that over 36 percent of the rural trees in South Dakota are green ash. That would include bottomland and upland forests, as well as planted windbreaks. Statewide, there are over 185,200 acres of ash trees (green, white, and black) in bottomland and upland forests according to the 2005 USDA Forest Service, forest inventory data. Green ash is still being planted as a major component of windbreaks throughout South Dakota. RCF and South Dakota State University Extension have encouraged consumers to reduce the use of ash species in South Dakota's landscape through planting of other native tree species.

### **Specific Plan Details**

#### **I. GENERAL READINESS:**

To reduce risk, minimize impact, and respond more effectively to a possible infestation of the EAB and to partner towards overall health and sustainability of the forests, both urban and rural, throughout South Dakota.

A. Establish a network of agencies and organizations that may be affected by the EAB into an executive council (Appendix B) made up of a Technical Team for prompt evaluation and action, and a Communications Team for providing uniform and accurate information and education. The following agencies have, by law, been assigned the responsibility of managing an exotic pest infestation and have been granted the legal authority to act by the federal, state, or local government

- South Dakota Department of Agriculture Division of Agricultural Services (AS) [SDCL 38-24A]
- South Dakota Department of Agriculture Division of Resource Conservation and Forestry (RCF) [SDCL 41-21]
- United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS) Plant Protection and Quarantine (PPQ) [7 USC 7701]
- Department of Interior, Bureau of Indian Affairs (BIA)
- Affected Tribal Governments
- United States Department of Agriculture, Forest Service (USFS)
- Affected local government(s) at site(s) of infestation

1. Technical Team – Lead in monitoring, confirmation, quarantine establishment, and eradication efforts to eliminate EAB populations.

- AS [Co-Lead Organization]
- RCF [Co-Lead Organization]
- South Dakota State University Extension (SDSU)
- USDA APHIS PPQ (PPQ)
- USDA Forest Service (FS)
- BIA
- Affected Tribal Government
- Affected Local Government

2. Communication Team – Lead in communicating accurate information, quickly and broadly in a manner that supports the Technical Team to prevent and control EAB infestations.

- AS [Co-Lead Organization]
- SDSU
- RCF
- USDA APHIS PPQ [Co-Lead Organization]
- USDA FS
- BIA
- Affected Tribal Government

- South Dakota Arborist Association (SDAA)
- South Dakota Nurseryman and Landscape Association (SDNLA)
- South Dakota Association of Conservation Districts (SDACD)
- South Dakota Municipal League (SDML)
- Governor's Representative, State of South Dakota
- South Dakota State Association of Counties (SDSAC)

B. Administrative Readiness – to ensure that current, relevant, and achievable policies are in place that allow the actions described in this plan to occur quickly and unencumbered.

1. Draft EAB Readiness Plan [Technical Team]
  - a) Distribute plan to Technical Team
  - b) Technical Team members to distribute condensed plan to constituencies
  - c) Foster cooperation among agencies for implementation
  
2. Identify resources and needs [Technical Team]
  - a) Evaluate staffing needs in regulatory agencies
  - b) Monitor nursery field operations
  - c) Determine firewood movement
  - d) Identify sources of funding for readiness activities
  - e) Assess human and technical resources (e.g. tree climbers)
  
3. Take proactive steps to speed administrative processes [Technical Team]
  - a) Analyze AS and RCF procedures to identify streamlining opportunities
  - b) Analyze PPQ and FS procedures to identify streamlining opportunities
  - c) Technical Team to communicate EAB status to South Dakota Homeland Security and Emergency Management
  - d) Technical Team to encourage communities to examine local administrative processes for streamlining opportunities
  
4. Educate the media to ensure accuracy of information [Communications Team]
  - a) Issue a press release on the final plan
  - b) Coordinate Public Information Officers
  - c) Identify key sources of current information
  - d) Develop/distribute EAB posters to primary public and private campgrounds and roadside rest areas

5. Explore wood waste utilization opportunities with RCF to reclaim ash material to its highest possible use should a volume of material suddenly become available [Technical Team]

C. Technical Readiness – to ensure that policy decisions, actions, and education initiatives are guided by the best and most current science

1. Review and distribute scientific guidelines to advise actions [Technical Team]
2. When issued, operate under New Pest Response Guidelines or other relevant USDA technical guidelines
3. Advocate for continued research for greater understanding of EAB and management options
4. Participate in annual and/or regional forest pest meetings [Technical Team]
5. Transfer technology to field foresters, arborists, and nursery professionals as it becomes available [Technical Team]
6. Participate in PPQ EAB Tabletop Exercises to evaluate readiness and response efforts. [Technical Team]

## **II. REDUCE RISK OF INFESTATION:**

To assure that all means of EAB introduction are known and controlled, as soon as possible.

A. Assess Risk – Determine the size and scope of the ash resources within South Dakota forests and urban areas and determine the severity of new and existing EAB infestations [Technical Team]

1. Identify possible sources of EAB importation (i.e., ash logs, chips, firewood, and nursery stock) from affected areas
2. Assess the scope of the resource at risk (number of ash trees)
3. Analyze density of ash populations to determine high risk areas
4. Track spread of EAB and distribute to Communications Team

B. Reduce Risk

1. Raise public awareness about risk from firewood importation [Communications Team]

- a) Install educational posters at federal, state, county and large private campgrounds and highway rest areas along I-90 and I-29
  - b) Promote “EAB-free” firewood from reputable firewood dealers
  - c) Implement “burn what you bring” firewood policy in South Dakota’s private and public campgrounds
2. Technical Team to convene a Firewood Committee to analyze the firewood market and find ways to reduce the risk of importation with representatives from:
    - AS
    - USDA-APHIS-PPQ
    - RCF
    - South Dakota Arborist Association
    - South Dakota Conservation District Boards
    - South Dakota Department of Economic Development – Tourism
3. Educate industries about risk of ash importation [Communications Team]
    - a) Educate contractors and municipalities about the importance of knowing the source of ash trees and ensure they are from EAB-free areas
    - b) Educate garden centers and firewood dealers about risk
    - c) Educate trucking associations to help track movement of ash
4. Ensure full and thorough analysis of ash nursery stock movement and effective inspection of current ash stock [Technical Team]
    - a) Advocate for strong state support of nursery inspection program
    - b) Track nursery stock importation in recent past
    - c) Review trace-back program for nursery shipping records from Michigan with the assistance of ANLA (American Nursery and Landscape Association)
    - d) Advocate for a voluntary ash moratorium within South Dakota
    - e) Advocate for increased production of non-ash nursery stock in South Dakota
5. Ensure planting selections contribute to a diverse and sustainable urban forest [Communications Team]
    - a) Educate municipalities and large property managers about diversity in planting
    - b) Assist local governments in tree assessments and inventories to analyze diversity and guide planting decisions
6. Seek legislative support to reduce risk [Technical Team]
    - a) Active participation from Governor’s Representative
    - b) Ensure South Dakota’s control efforts are well supported
    - c) Advocate for readiness funding

- d) Advise federal legislators of the hardship of state required match of federal funds
7. Investigate the development and implementation of using zip codes to trace infested materials movement into federal, state, and private campgrounds

### **III. ONGOING MONITORING PROGRAM:**

To minimize the spread and improve odds of containing an infestation

A. Survey urban, rural, and campground ash populations to find or rule out the presence of EAB following USDA-FS-FHP and APHIS survey protocols [Technical Team]

1. Continue USDA-FS-FHP partnership surveys [Technical Team]
2. Continue APHIS trapping
3. Convene Technical Team to survey and monitor ash populations to determine the presence of the EAB including representatives from:
  - AS [Lead Organization]
  - SDSU
  - RCF
  - USDA APHIS PPQ
  - USDA FS
  - South Dakota Arborist Association (SDAA)
  - South Dakota Nurseryman and Landscape Association (SDNLA)
  - South Dakota Association of Conservation Districts (SDACD)
  - South Dakota Parks & Recreation Association
  - Tribal Representative
4. Enable municipal and commercial green industry professionals to participate in monitoring and reporting [Technical Team]
5. Communicate survey results to stakeholders and the media, including an informational Web site [Communications Team]

B. Educate the public and professionals to provide stakeholders with current and accurate information in a targeted manner to aid in rapid identification of symptoms of an infestation [Communications Team]

1. Offer training and outreach based on current information to landscapers, arborists, Master Gardeners, nurserymen and other green industry workers to assess ash health and accurately identify EAB [Communications Team]

2. Educate the general public about EAB [Communications Team]
  - a) Secure/develop simple educational materials for the general public
  - b) Pursue opportunities for speaking, educating, and exhibiting educational displays, including EAB identification material
  - c) Broadly distribute public education materials
  
3. Recruit and enable volunteer scouting [Technical Team]
  - a) Promote awareness through the media with regular press releases and public appeals for help in scouting
  - b) Prepare kits to support volunteer scouting by both individuals and groups (e.g. Master Gardeners, youth groups, etc.)

C. Coordinate state and national information to address professional and public inquiries from South Dakota and foster cooperation and communication

1. Technical Team members are requested to link to USFS, PPQ and Web sites in quarantined states
  
2. Coordinate with <http://www.emeraldashborer.info/> to add South Dakota information [Communications Team]
  
3. Support full staffing of participating agencies so that vital information about South Dakota forest health is readily available [Technical Team]

D. Guide public inquiries and possible sightings through the process outlined in Appendix C. [Technical Team]

E. Guide *professional* (arborist, entomologist, pathologist, plant health care specialist) inquiries and possible sightings through the following process. [Communications Team]:

1. If a suspected EAB is found, contact:  
**AS 605.773.4029**  
**RCF 800.275.4954 or**  
**USDA-APHIS-PPQ 605.224.1713**

Personnel from these agencies will inspect the suspected ash tree(s) and identify the specimen(s)

2. Collected specimen will be sent or delivered to the State Entomologist's Office or South Dakota's USDA-PPQ office and will include the information requested in Appendix E, who will then forward the specimen to a PPQ identifier:



**State Entomologist:**

John Ball  
Rm 201, Northern Plains Biostress Lab  
North Campus Lane  
South Dakota State University  
Brookings, SD 57007-0996

**South Dakota USDA-PPQ:**

Bruce Helbig  
USDA APHIS, PPQ  
P.O. Box 250  
Pierre, SD 57501

3. If collected specimen is initially confirmed to be EAB by a PPQ Identifier, the specimen will then be sent to the National Systematic Entomology Laboratory to make final identification.
4. All Technical Team Members are notified that a suspect EAB is in the system for identification. **However, at this point, all information is NOT for public dissemination.**
5. The result, either positive or negative for EAB, is received from the Systematic Entomology Laboratory by PPQ, who will notify the Technical Team

**IV. IN THE EVENT OF AN INFESTATION, CONTAIN AND MANAGE THE EAB POPULATION:**

The Technical Team, with cooperation of the affected local government(s), will implement coordinated efforts to contain the infestation according to New Pest Response Guidelines established by USDA or from research conducted by state or federal agencies.

- A. Technical Team will take the lead in planning and implementing actions
  1. Begin response with affected county and city government(s)
    - a) Technical Team will meet to discuss and determine the preliminary plan of action
    - b) Technical Team will schedule an emergency meeting with cooperators (e.g. regulated industries, local government, recreational areas, and Tribal representatives)
    - c) Communications Team will release verified, accurate information to the press
  2. Organize, initiate and conduct a delimiting survey to determine the outer boundary of the infestation.

3. AS implements an EAB State Interior Quarantine regulating all potential host material (ash wood and ash wood products) within the quarantined area as determined by the delimiting survey. This would include the “declaration of all plants and part thereof infested with the EAB as a nuisance in the State of South Dakota” as well as the establishment of a formal quarantine of the infested area(s).

- a) A federal quarantine regulating interstate movement will be initiated by PPQ following state quarantine guidelines
- b) Communications Team will release accurate information to the press

4. Regulatory and control activities will be initiated as necessary by Technical Team.

- a) Administer provisional quarantine established by AS consistent with SD Administrative Rule 12:62:03:07. Emergency rules will be issued.
- b) Determine if removal of potential host trees is appropriate
- c) Develop and adopt compliance agreement with stakeholders in cooperation of quarantines (see Appendix C)

B. Communicate and coordinate actions, information and response  
[Communications Team]

- 1. Provide accurate information and updates to the media through EAB Communications Team
- 2. Provide accurate information to affected residents
  - a) Communications Team will prepare information for customizing and distributing to affected area immediately after infestation is found
  - b) Technical Team will cooperate with local governments to host local resident/land owner meetings to share information as soon as possible after finding an infestation. Technical Team will organize these meetings.
- 3. Communicate with public and industry professionals to foster cooperation to maximize effective response [Communications Team]
- 4. Communicate eradication success stories [Communications Team]

C. Dispose of wood debris in cooperation with local governments [Technical Team]

- a) Establish processing facilities in the quarantine zones to efficiently handle ash debris and reclaim useable products as best as possible
- b) Market reclaimed wood products, if feasible

D. Develop and investigate the implementation of a reforestation program authorized under applicable federal, state and local authorities using available resources [Technical Team]

## **V. IN THE EVENT THAT THE EMERALD ASH BORER CANNOT BE CONTAINED OR ERADICATED IN SOUTH DAKOTA:**

The technical team, with cooperation from affected local government(s), will pursue the following items in the event that the EAB population cannot be contained or eradicated:

- A. Response for woodlands and forests
  - 1. Develop (Technical Team) and distribute (Communications Team) silvicultural guidelines
  - 2. Local market utilization will be examined and encouraged by the Technical Team
  - 3. Quarantine and compliance agreements will be developed and maintained by the Technical Team to restrict movement from EAB infested area(s)
  
- B. Response to cities and local governments
  - 1. Municipal ordinances will be reviewed and appropriate recommendations made by the Technical Team
  - 2. Local response plans will be developed by the Technical Team
  - 3. Training programs will be conducted for local governmental staff by the Communications Team
  
- C. Response for residential concerns (Communications Team)
  - 1. Develop and distribute factual information (print media, Web, public service announcements, etc.) for homeowners
  - 2. Conduct annual training for arborists, landscape professionals, and other green industry personnel to keep this service-related business sector informed of effective management efforts for EAB. Issue a certificate of attendance for each person attending training.
  
- D. Seek legislative support to cover costs associated with EAB [Technical Team]
  - 1. Active participation from Governor's Representative
  - 2. Advocate for matching funds at state and federal levels to assist local government(s) in clean up efforts
  - 3. Advocate for readiness funding from stakeholders

## **Appendix A:**

### **Emerald Ash Borer Links**

#### **USDA Forest Service:**

[http://www.na.fs.fed.us/spfo/pubs/pest\\_al/eab/eab.pdf](http://www.na.fs.fed.us/spfo/pubs/pest_al/eab/eab.pdf)

#### **APHIS:**

[http://www.aphis.usda.gov/plant\\_health/plant\\_pest\\_info/emerald\\_ash\\_b/index.shtml](http://www.aphis.usda.gov/plant_health/plant_pest_info/emerald_ash_b/index.shtml)

#### **South Dakota Resource Conservation and Forestry:**

<http://www.state.sd.us/doa/forestry/educational-information/index.htm>

<http://www.state.sd.us/doa/forestry/publications/Emerald-Ash-Borer-flyer-firewood.pdf>

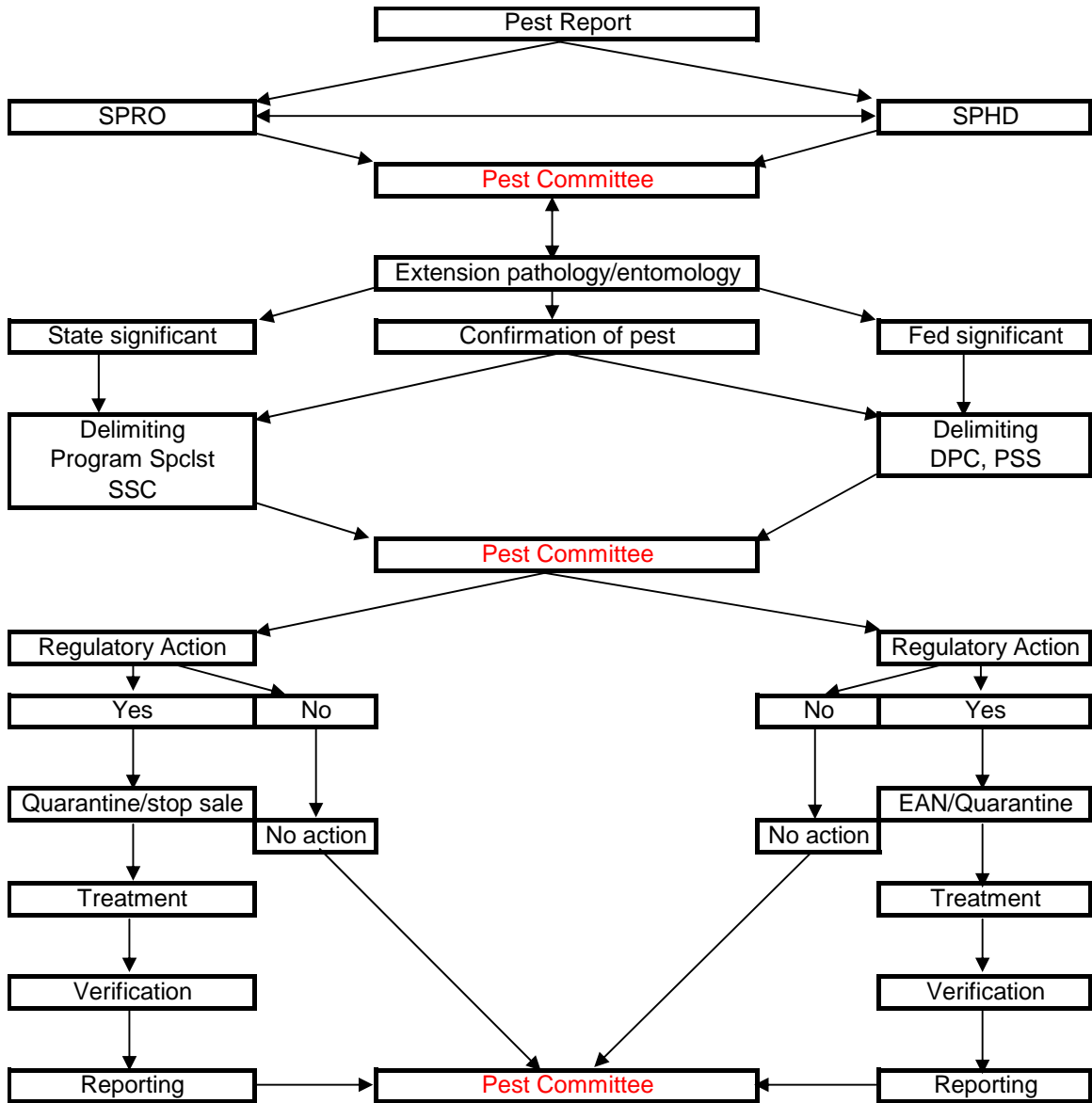
#### **General Information:**

<http://emeraldashborer.info/>

**Appendix B:****South Dakota Forest Insect & Disease Management Group Members**

- South Dakota Department of Agriculture – Resource Conservation and Forestry Division
- South Dakota Department of Agriculture - Agricultural Services Division
- South Dakota State University Extension
- United States Department of Agriculture – Animal Plant Health Inspection Service – Plant Protection and Quarantine
- United States Department of Agriculture – Forest Service
- United States Department of Agriculture – Natural Resources Conservation Service
- Department of Interior, Bureau of Indian Affairs
- Local Governments
- Tribal Representatives
- SD Arborist Association
- SD Nurseryman and Landscape Association
- SD Association of Conservation Districts
- SD Municipal League
- SD State Association of Counties

**Appendix C:  
Action Matrix for South Dakota if Emerald Ash Borer Suspected or Found**



**Appendix E:  
Sample Submission for Suspected Emerald Ash Borer**

- 1. Complete the form on the reverse side to the best of your ability. Give complete information pertinent to the sample, including background information.**
- 2. Send as many insect specimens as possible.**
- 3. Place insect specimen in glass vial containing the alcohol-gel sanitizer. Gently push the specimen down into the gel with a pencil. Tightly close the vial with the screw cap.**
- 4. If sending multiple site samples fill out the submission form for each sample and put specimens from different sites in different vials. Label vials accordingly.**
- 5. Place the vial in bubble wrap, packing foam, or shredded paper to cushion during shipment.**
- 6. If sending damaged wood, you will need to send as much of the material as possible.**
- 7. Ship in crush-proof container immediately soon after collecting. Send to:**

**South Dakota Department of Agriculture  
3305 ½ West South Street  
Rapid City, SD 57702**

**Sample Submission Form for Suspected Emerald Ash Borer**

**Client Name:** \_\_\_\_\_

**Client Address:** \_\_\_\_\_

**Submitter Name:** \_\_\_\_\_

**Submitter Address:** \_\_\_\_\_

**Client County:** \_\_\_\_\_

**Submitter Affiliation:** \_\_\_\_\_

**Client Daytime Phone:** \_\_\_\_\_

**Submitter Daytime Phone:** \_\_\_\_\_

**Client Email Address:** \_\_\_\_\_

**Submitter Email Address:** \_\_\_\_\_

**Date Collected:** \_\_\_\_\_

**Collection Location Details:**

\_\_\_\_\_  
\_\_\_\_\_

**Number of Ash Trees Affected:** \_\_\_\_\_

**Type of Ash Tree:** \_\_\_\_\_

**Emerald Ash Borer Symptoms Present:**

\_\_\_\_ **Epicormic sprouting**

\_\_\_\_ **Crown dieback**

\_\_\_\_ **S-shaped larval tunnels**

\_\_\_\_ **D-shaped exit holes**

**Other:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**For Office Use:**

**Date Received:** \_\_\_\_\_

**Tentative Identification by:** \_\_\_\_\_