



Panel: Planning for Invasive Insect Management

Marla Eddy, City Forester, Madison WI

Cliff Sadof, Department of Entomology, Purdue University

Jim Tresouthick, Village of Homewood

David Sivyer, Forestry Services Manager, Milwaukee WI

Marla Eddy

Generality of a product completed in Aug. '09: WI created Best Management Practice for preventing introduction & spread of invasive species

'04 – threat of invasives determined biggest threat facing WI forests

4 Best Management Practices created:

Forestry

Recreation

Urban

Transportation, Utility Right of Way

Identified 24 partners from industry, government, business, NGOs, education

Process got all groups collaborating on how to deal with invasive pests.

Not just insects, but plants as well.

Product geared toward professionals in urban issues

Provides unity in approach for practitioners

Technical team to advise advisory committee which would then write the specs

Some requirements are pretty obvious, but cover everything they could think of

Available on line at www.council.wisconsinforestry.org/invasives

Serves to get all on same page with same message.

David Sivyer – Mapping the Future for Emerald Ash Borer Readiness and Response Planning

Used all available resources to establish best practices

#1

Mapping the future for EAB readiness and response planning

Using to map to species level – RFP Mapping

#2

EAB readiness & response strategies – 2-point message

Risk Assessment

Risk Mgt

Based on a full assessment of risk and how to manage that risk

#3

Risk Assessment

Host assessment

Understand ecological impacts

Public safety

Operations impact

#4

Host assessment

Structural risk – how many trees?

Helps establish how big the problem is

Beetles will conduct 100% inventory – not recommended

Remote sensed hyperspectral imaging shows where the ash trees are

Functional risks – what the trees provide

#5

Risk Management

Public Safety (person & property)

Pest can compromise safety

Have to consider public & private trees – threatening other property, public rights of way, utility ROW

Community Outreach: HIP, lets them know who has ash, what the risk is, their options.

#6

Host assessment – computerized tree inventory

#7-8

EAB Structural impacts

193k street trees, 33k ash, 17% of canopy

R&R ash - \$27 million

i-Tree Eco (formerly UFORE) canopy assessment

#9

Milwaukee's Urban Forest

3.4 million trees, 21.5% canopy

587k ash trees at risk

#10

Forest valuation

\$1.4 billion structural value (replacement in-kind)

\$9 million carbon storage

Functional value

\$321k C sequestration

\$2.5 million air pollution

#11

EAB urban forest impacts

17.3 % canopy loss

Helps sell need for work

#12

Hyperspectral Imaging (HSI)

Digital imaging process that can determine tree cover by species

#13

Hyperspectral Imaging (HSI)

#14

Spectral Imagery Attributes

Into mid IR spectrum

#15

Imagery comparison – panchromatic, IR can't see target, HSI can

#16

Can be used for counter-narcotics operations

Used for mapping health of trees in Canada

1-1.2 meter spatial resolution

#17

Comparison of imaging

#18-19

HIS ash mapping

Measured spectral signature of leaves to get baseline – Aug 08

#20

Milwaukee HSI data

#21

HSI Milwaukee urban forest

#22

LIDAR imagery masked out all that's not trees.

#23

HSI image with control

#24

Shows additional ash, provided as GIS layer

#25

Further discrimination

#26-28

More, shows imagery as provided

Overall accuracy about 80%

#29

More imagery, along Milwaukee River

#30-31

Community awareness, 7 digital billboards with EAB message

#32

Don't haul firewood, or your ash is mine.

#33-34

Community outreach

#35

Injections manage risk during transition to other species

#36

\$49 per tree.

#37-38

Summary, contact

Jim Tresouthick, Village of Homewood, Southside of Chicago

Heavily industrialized area in former years, now a bedroom community

Urban forestry not a major buzzword there, not as much support

Of 43 communities in the area, 4 have community forester/arborist

They make up a close network who work together spreading word about EAB

Many communities choose not to acknowledge they have EAB – too expensive to deal with

As a region, working together – it's a real problem, communities have to step up to the plate.

Information is there if anyone wants it.

Homewood became EAB+ in 07, but it was probably there longer.

Looked at costs, in-house, contractual, reforestation.

Management plan for Homewood's limited budget, staff etc: recommendation was to remove ash cyclically over 4 years.

Not popular, but have been putting information out wherever possible.

4 yrs from now, all ash will be removed & replaced.

Using 5-7' stock, would like smaller, not popular position, though – people would rather have bigger trees faster.

Can diversify the urban forest, get volunteers, higher survival rate, can be done.

Other things to talk about might involve politics... Politicians set stage for how urban forestry is done. Need to continue working together to find solutions.

Questions for the Panel:

Q: To David Sivyver: what did it cost for HSI?

A: Bought final product, not images.

Q: Did Jim use EAB calculator?

A: Came out after their situation, but ran numbers when it became available, found it to be fairly accurate.

Q: To Jim Tresouthick: What was cost per tree in Homewood?

A: Removal done in-house, \$23.98/inch including stump grinding. Avg dbh 18", found home for all debris, including larger parts going to higher use. 623 trees. Doesn't include private trees.

Q: To David Sivyler: What about private homeowners?

A; Trying to give them as much advance warning as possible, advising them about EAB & options.

Q: To David Sivyler: Did the city require them to replace ash?

A; They have the authority to do so, but are hoping that it won't be necessary. There will probably be a large number who won't do anything until forced.

Q: To David Sivyler: Was the proportion of trees that are ash the same for private and public land?

A: About the same.

Q: To David Sivyler: What are they using to treat the trees?

A: Tree-age