

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Natural Resources and Environment

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
101	Appraisal of Soil Resources	1%		1%	
102	Soil, Plant, Water, Nutrient Relationships	18%		18%	
104	Protect Soil from Harmful Effects of Natural Elements	5%		5%	
111	Conservation and Efficient Use of Water	2%		2%	
112	Watershed Protection and Management	6%		6%	
121	Management of Range Resources	1%		1%	
123	Management and Sustainability of Forest Resources	18%		18%	
125	Agroforestry	1%		1%	
131	Alternative Uses of Land	10%		10%	
132	Weather and Climate	4%		4%	
133	Pollution Prevention and Mitigation	24%		24%	
135	Aquatic and Terrestrial Wildlife	10%		10%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2012	Extension		Research	
	1862	1890	1862	1890
Plan	1.4	0.0	6.5	0.0
Actual Paid Professional	5.0	0.0	20.3	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
839965	0	620896	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
1486959	0	2236925	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
306640	0	870154	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Workshops
- Extension publications
- Public service announcements
- Research projects
- Web site development
- Home and farm visits
- Displays
- IP video programs
- Demonstrations and field days
- One-on-one consultations
- Collaboration with other agencies

2. Brief description of the target audience

- Agricultural producers
- Rural and urban residents
- Elected officials and other decision-makers
- Owners of private and public forestlands and wildlands
- Natural resource professionals
- Technical service providers
- Tree care providers
- Right of way managers
- Urban planners
- Youth

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2012	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	150638	2404303	29283	27628

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2012
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2012	Extension	Research	Total
Actual	0	156	156

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of programs offered to producers, land owners, and land managers.

Year	Actual
2012	569

Output #2

Output Measure

- Number of research projects

Year	Actual
2012	290

Output #3

Output Measure

- Number of demonstrations and field days

Year	Actual
2012	425

Output #4

Output Measure

- Number of Extension publications written, new & revised

Year	Actual
2012	226

Output #5

Output Measure

- Number of K-12 Classroom visits

Year	Actual
2012	445

Output #6

Output Measure

- Number of one-on-one consultations

Year	Actual
2012	16427

Output #7

Output Measure

- Number of newsletter or magazine articles written

Year	Actual
2012	560

Output #8

Output Measure

- Number of volunteers trained

Year	Actual
2012	1814

Output #9

Output Measure

- Number of Extension publications distributed

Year	Actual
2012	35747

Output #10

Output Measure

- Number of research publications

Year	Actual
-------------	---------------

2012

156

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of participants who increase knowledge of practices to protect water resources
2	Number of participants who improve decision making for use of water resources
3	Number of participants who increase knowledge of proper application of fertilizer, manure and waste products to soil and potential for environmental consequences of misapplication
4	Number of participants who increased adoption of proper application of fertilizer, manure and waste products to soil
5	Number of participants who increase knowledge of best management practices for optimal manure nutrient utilization with on- and off-site agricultural lands
6	Number of participants who adopt best management practices for optimal manure nutrient utilization with on- and off-site agricultural lands
7	Number of participants who increase knowledge of the value of ponds in landscapes and methods for installing and managing ponds
8	Number of participants who increase value of landscapes through better installation and management of ponds
9	Number of participants who increase knowledge of on-site wastewater treatment siting and maintenance needs
10	Number of participants who make more informed decisions for on-site wastewater treatment siting and maintenance
11	Number of water quality violations related to animal production and land application in the state of Indiana
12	Number of tree care providers in Indiana who become certified arborists.
13	Number of professional natural resource advisors who have the skills necessary to assess the health of the wildlands
14	Number of wildlands owners who have a relationship with knowledgeable professional natural resource advisors and have developed and implemented a management plan
15	Number of natural resource professionals and wildland owners who have worked with landowners to develop and implement management plans
16	Number of owners of wildlands who will have assessed the health of their lands and developed and implemented management plans
17	Number of landowners with knowledge of proper tree planting and management techniques

18	Number of participants who increased their knowledge of natural resource management
19	Number of participants who increased their knowledge of proper application of pesticides
20	Number of participants who increased their knowledge of topsoil importance
21	Number of participants who increased their knowledge of Indiana's diverse wildlife
22	Number of woodlot owners who improved their management skills

Outcome #1

1. Outcome Measures

Number of participants who increase knowledge of practices to protect water resources

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Number of participants who improve decision making for use of water resources

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

Number of participants who increase knowledge of proper application of fertilizer, manure and waste products to soil and potential for environmental consequences of misapplication

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Number of participants who increased adoption of proper application of fertilizer, manure and waste products to soil

Not Reporting on this Outcome Measure

Outcome #5

1. Outcome Measures

Number of participants who increase knowledge of best management practices for optimal manure nutrient utilization with on- and off-site agricultural lands

Not Reporting on this Outcome Measure

Outcome #6

1. Outcome Measures

Number of participants who adopt best management practices for optimal manure nutrient utilization with on- and off-site agricultural lands

Not Reporting on this Outcome Measure

Outcome #7

1. Outcome Measures

Number of participants who increase knowledge of the value of ponds in landscapes and methods for installing and managing ponds

Not Reporting on this Outcome Measure

Outcome #8

1. Outcome Measures

Number of participants who increase value of landscapes through better installation and management of ponds

Not Reporting on this Outcome Measure

Outcome #9

1. Outcome Measures

Number of participants who increase knowledge of on-site wastewater treatment siting and maintenance needs

Not Reporting on this Outcome Measure

Outcome #10

1. Outcome Measures

Number of participants who make more informed decisions for on-site wastewater treatment siting and maintenance

Not Reporting on this Outcome Measure

Outcome #11

1. Outcome Measures

Number of water quality violations related to animal production and land application in the state of Indiana

Not Reporting on this Outcome Measure

Outcome #12

1. Outcome Measures

Number of tree care providers in Indiana who become certified arborists.

Not Reporting on this Outcome Measure

Outcome #13

1. Outcome Measures

Number of professional natural resource advisors who have the skills necessary to assess the health of the wildlands

Not Reporting on this Outcome Measure

Outcome #14

1. Outcome Measures

Number of wildlands owners who have a relationship with knowledgeable professional natural resource advisors and have developed and implemented a management plan

Not Reporting on this Outcome Measure

Outcome #15

1. Outcome Measures

Number of natural resource professionals and wildland owners who have worked with landowners to develop and implement management plans

Not Reporting on this Outcome Measure

Outcome #16

1. Outcome Measures

Number of owners of wildlands who will have assessed the health of their lands and developed and implemented management plans

Not Reporting on this Outcome Measure

Outcome #17

1. Outcome Measures

Number of landowners with knowledge of proper tree planting and management techniques

Not Reporting on this Outcome Measure

Outcome #18

1. Outcome Measures

Number of participants who increased their knowledge of natural resource management

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2012	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Emerald Ash Borer (EAB) is spreading through Indiana and the region, killing unprotected ash trees. EAB costs homeowners, businesses, and municipalities millions of dollars associated with falling dead ash trees and the associated loss of their ecosystem services and damage to property.

What has been done

Empowering the Public to Combat Emerald Ash Borer (EAB) was an effort by Purdue Extension specialists and educators who developed decision making tools to optimize EAB management, delivered multi-state coordinated outreach messages about EAB, its impacts, management tools with regional impact that addresses multiple audiences, including homeowners, arborists, municipal decision makers, and educators. Purdue Extension created ad hoc task force of urban foresters, city managers, community groups to identify needs, review tools, and messaging strategies through Neighbors Against Bad Bugs (NABB). This started with tagging ash trees to raise awareness of local impacts of losing ash trees, and then directed people to the website EABindiana.info for resources: EAB Decision Guide, Pesticide Updates, You-Tube Videos, EAB Cost Calculator, NABB organization guide, EAB University. Purdue Extension specialist and educators created a mobile app, Purdue Tree Doctor to help clients better identify and manage tree disorders caused by insects and diseases.

Results

EABindiana.info website received over 110,000 hits, insecticide YouTube videos collectively received over 5,100 downloads. NABB program website had nearly 5,000 hits, and Purdue resources were adapted for use in 10 states. EAB Decision Guide 6,700 copies distributed to 10 states and downloaded over 2,050 times. Over 1000 community managers from Missouri to Massachusetts used EAB Cost Calculator to help plan their response to EAB to reduce annual costs for managing EAB while preserving a large part of their urban forest. 220 participants from 22 states attended six EABU webinars, with over 1000 downloads of the recording. Of those responding to survey, over 80% used information to change their approach to EAB management. Over 900 Purdue Tree Doctor apps sold since released in 2012. Most sales have been in the United States, but also in other countries, including Australia, Germany, Japan, United Kingdom, Canada, Chile, Singapore, Spain, China, Belgium, and Turkey. One app purchaser called it an excellent app, This is the best \$2.00 you will ever spend. Tree Doctor is easy to use, gives great information, and the pictures are excellent. This is a must have resource in the field and office.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
121	Management of Range Resources
123	Management and Sustainability of Forest Resources

Outcome #19

1. Outcome Measures

Number of participants who increased their knowledge of proper application of pesticides

Not Reporting on this Outcome Measure

Outcome #20

1. Outcome Measures

Number of participants who increased their knowledge of topsoil importance

Not Reporting on this Outcome Measure

Outcome #21

1. Outcome Measures

Number of participants who increased their knowledge of Indiana's diverse wildlife

Not Reporting on this Outcome Measure

Outcome #22

1. Outcome Measures

Number of woodlot owners who improved their management skills

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

- Outcome 19 - tracking website hits, distribution and sales of resources - EAB tools and resources for the public

Key Items of Evaluation

- Outcome 19 - over 110,000 website hits, 5,1000 YouTube downloads, 6,700 decision guides distributed to 10 states and over 2,050 downloads; over 1000 community managers from Missouri to Massachusetts used EAB cost calculator, over 90 Purdue tree doctor apps sold in U.S. and 11 other countries