

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Climate Change

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
102	Soil, Plant, Water, Nutrient Relationships	20%		70%	
111	Conservation and Efficient Use of Water	20%		0%	
112	Watershed Protection and Management	20%		15%	
124	Urban Forestry	20%		15%	
141	Air Resource Protection and Management	10%		0%	
806	Youth Development	10%		0%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	3.0	0.0	1.0	0.0
Actual Paid	2.9	0.0	4.0	0.0
Actual Volunteer	141.0	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
107887	0	155518	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
107887	0	211446	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

1. Research projects on the changes in soil, air and water quality due to environmental decreasing urban forest; urban gardening; aging storm and waste water infrastructures; and effectiveness of low impact development projects as best management practices to reduce non-point source pollution;
2. Maintain soil, air, and water quality monitoring programs and testing lab;
3. Train and certify DC Public School Teachers as Environmental educators;
4. Develop and distribute informational materials such as fact sheets and brochures regarding changes in natural resources and environmental issues in the District;
5. Provide workshops, demonstrations and technical assistance on the effect of environmental degradation as it relates to the quality of life for District residents; and
6. Involve youth in litter control campaigns and environmental awareness education via education workshops at DC Public and Charter Schools, community events such as "Quality of Life Day" and the Land Grant Programs Urban Agricultural Fair at Muirkirk Research Farm.

2. Brief description of the target audience

- 1) District of Columbia residents
- 2) DC Public School Teachers
- 3) Youth, Grades K-12
- 4) Urban gardeners
- 5) Storm and waste water operators
- 6) Landscapers
- 7) Nursery Owners

3. How was eXtension used?

eXtension was not used in this program.

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	25286	52198	30	0

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

Patent Applications Submitted

Year: 2014
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of articles published

Year	Actual
2014	16

Output #2

Output Measure

- Number of fact sheets published

Year	Actual
2014	43

Output #3

Output Measure

- Number of newsletter published

Year	Actual
2014	10

Output #4

Output Measure

- Number of workshops, demonstrations and technical assistance implemented.

Year	Actual
2014	107

Output #5

Output Measure

- Number of research projects completed
Not reporting on this Output for this Annual Report

Output #6

Output Measure

- Number of soil, air and water samples test results

Year	Actual
2014	93

Output #7

Output Measure

- Number of informational materials distributed

Year	Actual
2014	49836

Output #8

Output Measure

- Number of conference presentations

Year	Actual
2014	0

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Percent of program participants that will become more environmentally aware due to new knowledge from informational materials provided and workshop presentations
2	Percent of program participants that will implement new environmental skills to improve natural resources and the environment
3	Percent of soil, air, and water samples meeting EPA standards after implementation of research project.

Outcome #1

1. Outcome Measures

Percent of program participants that will become more environmentally aware due to new knowledge from informational materials provided and workshop presentations

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	75

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Invasive species plants are recognized as one of the greatest threats to wildlife and natural ecosystems. They compete with native plants for limited natural resources such as water, sunlight, nutrients and habitat, crowding out and displacing the desirable native vegetation, thereby reducing overall biodiversity. This upset to the ecological balance is felt throughout the ecosystem as those species who are dependent on those native plants for their diet and habitat are no longer able to survive in the locale without them.

What has been done

Classes were conducted to introduce participants with the overarching concept of invasive species, discussing the qualifying criteria established by the National Invasive Species Council, the negative impact invasive plants have on the economy, the environment and human health, and how we aid their spread. The classes focused on approximately 10 invasive plants that are common in the District that can be removed fairly easily and effectively by manual and mechanical means. Participants learned identification and phenology of these plants using photographs and live samples, followed by information about various invasive plant management methods (manual, mechanical, chemical and biological controls). The concept of early detection rapid response (EDRR) was taught, and approximately eight EDRR plants were presented that are either heading towards DC, or that are actively escaping cultivation and naturalizing in DC parklands.

Results

A survey designed to evaluate measurable outcomes as a result of class participation was completed by 78 class participants. 96% reported that the class successfully explained what made species invasive and had a better understanding of why invasives are a problem as a result

of the class, while 85% learned that a species they were already familiar with was actually invasive. Ninety-five percent of participants planned to share their learned invasive plant information with others, 94% reported they would not purposefully install an invasive plant into their landscape, and 96% stated they would actively remove invasive plants if given the chance.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
124	Urban Forestry
141	Air Resource Protection and Management
806	Youth Development

Outcome #2

1. Outcome Measures

Percent of program participants that will implement new environmental skills to improve natural resources and the environment

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	105

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

There is a need to restore natural habitats and ecosystems and to protect biodiversity by working to eliminate invasive plants in DC through a coordinated effort across political and ecological boundaries.

What has been done

Six invasive plant management events were held to assist with invasive species removal on District of Columbia public land spaces.

Results

105 volunteers attended six invasive plant management work days, donating a total of 19 volunteer hours, demonstrating a change in behavior, and resulting in a corresponding change of condition in the parklands in which volunteering took place. The volunteer hours are valued at \$77,186, according to independentsector.org. In total, invasive plants were managed on 5.56 acres of parkland in the District.

4. Associated Knowledge Areas

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Outcome #3

1. Outcome Measures

Percent of soil, air, and water samples meeting EPA standards after implementation of research project.

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
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Two research projects were added in late fiscal year 2014. Preliminary work was completed. We expect to report impacts for the FY 15 report. Our work with invasive species continues to produce positive impacts. With an increase in knowledge, participants have taken action to volunteer efforts to remove invasive species in the District of Columbia. This action has improved the environment in DC parklands and resulted in labor

savings for the city.

Key Items of Evaluation