

V(A). Planned Program (Summary)**Program # 9****1. Name of the Planned Program**

Fishery Management (Aquaculture)

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
307	Animal Management Systems		100%		100%
	Total		100%		100%

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	1.0	0.0	0.0
Actual	0.0	0.3	0.0	0.2

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
0	15341	0	9160
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	12490	0	12490
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	13105	0	20355

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Work will be performed in fishery management under such conditions as pond nutrient loading, aquatic vegetation infestation and pond leaks.

2. Brief description of the target audience

All aquaculture farmers in Oklahoma.

V(E). Planned Program (Outputs)**1. Standard output measures**

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	200	300	0	0
Actual	350	380	0	0

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

Patent Applications Submitted

Year: 2009

Plan: 0

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of Research Projects completed on Fishery Management.

Year	Target	Actual
2009	0	0

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Number of farmers learning new fishery management techniques.
2	Number of farmers using new fishery management techniques.
3	Farmers who have improved thier production efficiency and raised their profits with the new fishery management techniques.

Outcome #1**1. Outcome Measures**

Number of farmers learning new fishery management techniques.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	200	2

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Home owners in urban areas often become pond caretakers through community covenants and home owners associations. The housing development is centered around a large pond. The pond watershed includes the houses. These neighborhoods are often upscale and have professional lawn services. The result is high nutrient levels from lawn and garden fertilization entering the pond and creating nuisance aquatic plant and algae problems with attendant consequences of fish kills and odors.

What has been done

During 2009, on-site visits were made to individual pond owners, home owners associations and representatives of these associations. Pond problems were evaluated and recommendations made concerning remedies for existing problems and methods of preventing future problems. Education was concentrated on nutrient reduction in the watershed and annual pond maintenance.

2009,

Results

Pond owners were generally very receptive to proposed solutions to problems. They were interested in working with lawns service enterprises to reduce phosphorus and nitrogen applications to lawns. Some home owners associations produced a newsletter sent to all members. Best Management Practices for lawn application of fertilizer and other pond related information was included in newsletters. Aeration devices were installed in some ponds. Overall improvement in urban pond water quality and consequently, watershed streams is likely to occur in the addressed areas.

4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems

Outcome #2**1. Outcome Measures**

Number of farmers using new fishery management techniques.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	20	2

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

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4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems

Outcome #3**1. Outcome Measures**

Farmers who have improved thier production efficiency and raised their profits with the new fishery management techniques.

2. Associated Institution Types

- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	10	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Home owners in urban areas often become pond caretakers through community covenants and home owners associations. The housing development is centered around a large pond. The pond watershed includes the houses. These neighborhoods are often upscale and have professional lawn services. The result is high nutrient levels from lawn and garden fertilization entering the pond and creating nuisance aquatic plant and algae problems with attendant consequences of fish kills and odors.

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4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)

Brief Explanation

External factors did not affect outcomes.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- During (during program)

Evaluation Results

Overall improvement in urban pond water quality at specific sites and consequently improvement in the quality of some watershed streams.

Key Items of Evaluation

- Increase in water quality for specific residential ponds.