V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Water Quality, Quantity and Security

☑ 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	6%		26%	
103	Management of Saline and Sodic Soils and Salinity	6%		1%	
111	Conservation and Efficient Use of Water	34%		15%	
112	Watershed Protection and Management	29%		11%	
123	Management and Sustainability of Forest Resources	0%		2%	
124	Urban Forestry	1%		0%	
131	Alternative Uses of Land	0%		2%	
132	Weather and Climate	2%		5%	
133	Pollution Prevention and Mitigation	17%		6%	
135	Aquatic and Terrestrial Wildlife	0%		4%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	0%		2%	
205	Plant Management Systems	1%		6%	
206	Basic Plant Biology	0%		4%	
311	Animal Diseases	0%		1%	
403	Waste Disposal, Recycling, and Reuse	3%		1%	
404	Instrumentation and Control Systems	0%		2%	
405	Drainage and Irrigation Systems and Facilities	1%		1%	
501	New and Improved Food Processing Technologies	0%		4%	
605	Natural Resource and Environmental Economics	0%		5%	
723	Hazards to Human Health and Safety	0%		2%	
	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	24.2	0.0	11.7	0.0
Actual Paid	2.0	0.0	1.0	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**
363510	0	157500	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
363510	0	157500	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
8594082	0	10151270	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

UC ANR's integrated research and extension activities will conduct research projects, workshops, education classes and demonstrations, as well as one-on-one interventions. In addition, the programs will use PSAs, newsletters, mass media, web sites and collaborations with other agencies and organizations to create and deliver programs.

2. Brief description of the target audience

- Governmental agencies
- Water managers
- UC campus-based water centers
- The general public
- Farmers
- Ranchers
- Agricultural organizations
- Owners/managers of private and public rangeland, forest and wildlands

3. How was eXtension used?

UC ANR academics used eXtension to participate in and contribute to Communities of Practice, to answer "Ask an Expert" questions, and for other networking purposes. The Division looks forward to the re-

invention into a system of greater value to California Extension.

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	54843	0	0	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	14	40	54

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Classes/Short Courses Conducted

Year	Actual
2014	8

Output #2

Output Measure

- Workshops Conducted

Year	Actual
2014	11

Output #3

Output Measure

- Demonstrations and Field Days Conducted

Year	Actual
2014	7

Output #4

Output Measure

- Newsletters Produced

Year	Actual
2014	2

Output #5

Output Measure

- Web Sites Created or Updated

Year	Actual
2014	3

Output #6

Output Measure

- Research Projects Conducted

Year	Actual
2014	21

Output #7

Output Measure

- Videos, Slide Sets and Other AV or Digital Media Educational Products Created
  Not reporting on this Output for this Annual Report

Output #8

Output Measure

- Manuals and Other Printed Instructional Materials Produced
  Not reporting on this Output for this Annual Report

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Farm, ranch, and rangeland owners/managers and allied industry professionals, participating in water quality education programs, will gain knowledge of best management practices for improving water quality.
2	Farm, ranch, and rangeland owners/managers and allied industry professionals, participating in water quality education programs, will adopt best management practices for improving water quality.
3	Farm owner/operators, allied industry professionals, and members of the public, participating in water conservation education programs, will gain knowledge of water use and conservation practices.
4	Farm, ranch, and landscape owners/managers, and allied industry professionals and governmental agency representatives, participating in the programs, will gain water conservation skills.
5	Farm owners/managers, allied industry and natural resource professionals, and members of the public, participating in the programs, will adopt of water conservation practices.
6	Farm and nursery owner/operators, home gardeners, and water regulation and policy leaders, participating in water quality education programs, will be more likley to use best management practices for improving water quality and for water conservation.
7	Farm owner/operators and managers, and allied industry professionals, participating in agriculture education programs, gained knowledge of irrigation and water management practices.
8	Farm, ranch and landscape owner/operators and managers, and allied industry professionals, participating in agriculture education programs, gained skills in recommended irrigation or other water and soil management practices.
9	Farm, ranch and nursery owner/operator and managers, and allied industry professionals, participating in agriculture education programs, adopted recommended irrigation or other water and soil management practices.

Outcome #1

1. Outcome Measures

Farm, ranch, and rangeland owners/managers and allied industry professionals, participating in water quality education programs, will gain knowledge of best management practices for improving water quality.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	168

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation

Outcome #2

1. Outcome Measures

Farm, ranch, and rangeland owners/managers and allied industry professionals, participating in water quality education programs, will adopt best management practices for improving water quality.

Not Reporting on this Outcome Measure

Outcome #3

1. **Outcome Measures**

Farm owner/operators, allied industry professionals, and members of the public, participating in water conservation education programs, will gain knowledge of water use and conservation practices.

Not Reporting on this Outcome Measure

Outcome #4

1. **Outcome Measures**

Farm, ranch, and landscape owners/managers, and allied industry professionals and governmental agency representatives, participating in the programs, will gain water conservation skills.

Not Reporting on this Outcome Measure

Outcome #5

1. **Outcome Measures**

Farm owners/managers, allied industry and natural resource professionals, and members of the public, participating in the programs, will adopt of water conservation practices.

Not Reporting on this Outcome Measure

Outcome #6

1. **Outcome Measures**

Farm and nursery owner/operators, home gardeners, and water regulation and policy leaders, participating in water quality education programs, will be more likley to use best management practices for improving water quality and for water conservation.

Not Reporting on this Outcome Measure

Outcome #7

1. Outcome Measures

Farm owner/operators and managers, and allied industry professionals, participating in agriculture education programs, gained knowledge of irrigation and water management practices.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	108

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
103	Management of Saline and Sodic Soils and Salinity

Outcome #8

1. Outcome Measures

Farm, ranch and landscape owner/operators and managers, and allied industry professionals, participating in agriculture education programs, gained skills in recommended irrigation or other water and soil management practices.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	725

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
103	Management of Saline and Sodic Soils and Salinity

Outcome #9

1. Outcome Measures

Farm, ranch and nursery owner/operator and managers, and allied industry professionals, participating in agriculture education programs, adopted recommended irrigation or other water and soil management practices.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	59

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
103	Management of Saline and Sodic Soils and Salinity

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

Brief Explanation

During FY 2014, California continued to face its worst drought in decades. Water supply and quality for agricultural, urban, and environmental systems has become one of the state's biggest challenges. UC ANR has focused efforts to serve as a resource both in offering everything from near-term management advice to farmers and ranchers to the innovative work being carried out by researchers on a vast array of issues from drought resistant crops to snow sensors to climate change.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

UC ANR's quantitative and qualitative outcomes recorded from the evaluation studies are reported under the State Defined Outcomes section.

Key Items of Evaluation

The Report Overview's federal Planned Program summary of accomplishments highlights UC ANR's most significant work during FY 2014, especially the research developments. In addition, significant success stories are reported as qualitative outcomes under the State Defined Outcomes section.