

# Environmental Service Systems Interest In A Supervised Agricultural Experience (SAE)

Ideas for developing an Environmental science-related  
SAE

# Environmental Service System Overview

- According to the National Council for Agricultural Education, Environmental Service Systems (ESS) is described as:  
*... the application of scientific principles and techniques to the management of environmental service systems.*
- Your interest in this area represents a wide range of opportunities related to science in agricultural education.



# Areas Of Interest In Environmental Service Systems

- Management of System...which could include:
  1. Water/Waste Management - relating to environmental measures
  2. Machinery - tools used in management
  3. Environmental Management - strategies or business practices
- Evaluation of Environmental Systems... which could include:
  1. Policy and Regulatory Issues - application of state and federal regulations
  2. Scientific Applications - science related to environmental services
  3. Other - monitor or research issues



# Summary Of Skills Associated With Environmental Service Systems

The ability to:

- Analyze and interpret samples in environmental analysis
- Interpret laws affecting environmental service systems.
- Apply meteorology principles, such as climate change.
- Apply soil science principles to environmental service systems.
- Use pollution control measures to maintain a safe facility environment, such as comparing point and non-point water pollutants.
- Manage safe disposal of all categories of solid waste.
- Apply the principles of public drinking water treatment operations to ensure safe water at a facility.



# Summary Of Skills Associated With Environmental Service Systems

- Apply principles of wastewater treatment to manage wastewater disposal in keeping with rules and regulations.
- Compare and contrast the impact of conventional and alternative energy sources on the environment.
- Use tools, equipment, machinery and technology to accomplish tasks in environmental service systems, which includes the application of science, technology, engineering and math.



# Connect Your Interests To Your Project

Entrepreneurship	Placement	Research	Exploratory
A for-profit venture	A work experience	A research project related	A learning experience
Time is invested	Time is invested	Time and money (if applicable) are invested	Time is invested
Money is invested & at risk; Provides opportunity to learn and possibly profit	Provides opportunity to learn & possibly earn a paycheck	Provides opportunity to learn through a research based question	Provides opportunity to learn through exploring the industry



# Environmental Service Systems - Projects Ideas:



Entrepreneurship Examples		Placement Examples	
Soil testing consultant	...other ideas where your project is related to a business situation, with a goal to develop a profit	Working at soil testing facility	...other ideas where your project is working within the environmental service systems area
Water quality / testing business		Working at business that develops garden fertilizers from dairy waste	
Alternative fertilizer business utilizing poultry waste		Working for the state department of water quality	
Dairy waste products converted to garden fertilizer		Working for wildlife management specialist in environmental analysis	



# Environmental Service Systems - Projects Ideas:



Research Examples		Exploratory Examples	
Nitrate study from various animal waste products used in composting	...other ideas where your project is answering a research question	Review of climate change related to agricultural production	...other ideas where your project is related to learning
Effects of water quality on growth of bass		Job shadowing at a agricultural animal waste division	
A historical review of weather impacts on crop production		Ag issues related to irrigation in drought conditions	
Measuring soil nutrients from alternative fertilizers		State environmental testing workshop for water quality	





# Does Environmental Service Systems Align To Your Interest?

- Your project should be:
  1. Based upon your interests
  2. Connected to your agricultural education courses
  3. Aligned to your involvement in FFA activities

If YES, continue to the student examples section. Also, complete the "Explore Your SAE" interactive builder tool and finally, develop an SAE Plan draft based on your results.

If NO, explore another area to determine your interests!

