**Agricultural Experiment Station**

**Colorado State University**

 **(for College of Agricultural Sciences Project Directors)**[This version includes instructions [in brackets and in red]. Additional guidance is

available in the REEport Guide for Project Directors

http://nifa.usda.gov/resource/reeport-guide-project-directors]
 **Project Outline**

1. **Project Number:**
2. **Project Title:**
3. **Goals and Objectives of Project:**

[Include the over-arching goal(s) of the project and the objectives that will be undertaken to achieve those goals (using outline format). Provide a clear, concise statement of the major goal(s). Goals should encompass a broad perspective of the purpose, service, major achievement, or milestone the project will provide. Following the goal statement(s), list the objective(s) related to that goal. Most goals will have multiple objectives. Objectives are focused, quantifiable, and measurable, whereas goals are more general and broad.

Goals and objectives identify products and outputs that will lead to outcomes and impacts. There is no maximum number of objectives to include for a project, but too many may become unmanageable. Objectives should be specific and be attainable within the duration of the project. However, reaching them may require funding beyond that available through the AES.

Two examples follow:

1. Revegetation project

Goal 1: Identify best management practices for the revegetation of surface disturbances in the Shortgrass Steppe region of Colorado. We seek to find approaches that are broadly applicable to a variety of sites across the region in order to be useful at a realistic management scale. Primary sites will be those impacted by oil and gas development and dewatered farmlands.

Objectives are:

1. Provide a literature review on the state of scientific knowledge regarding the best practices for restoration of surface disturbances on shortgrass steppe.
2. Identify common limiting factors for successful restoration of disturbed shortgrass steppe.
3. Determine optimum native seed mixtures for revegetation success under a variety of disturbance scenarios.
4. Determine best site preparation treatments to ensure revegetation success.
5. Water use efficiency project

Goal 1: Advance understanding of biophysical processes in water limited agroecosystems and develop management practices that promote long term sustainability. The project is undertaken across gradients of climate, soil type, and includes dryland and irrigated systems.

Objectives are:

* 1. Develop dryland cropping systems that maximize precipitation use efficiency through detailed understanding of crop productivity and individual components of a water mass balance over a range of cropping intensities.
	2. Develop irrigated cropping systems that reduce consumptive water use through a systems level study of crop rotation, irrigation management, and soil management approaches.
	3. Identify practical means of documenting consumptive water use savings during transition from full irrigation to limited irrigation and dryland cropping systems.

These examples have well written goals and examples that should lead to measurable and quantifiable products or outputs. Such outcomes are often referred to as “changes in knowledge.”

However, AES-funded projects also are expected to include at least one goal and one objective focused on taking the products or outputs of the project on to outcomes and impacts beyond changes in knowledge that impact the scientific community. Such outcomes are sometimes described as either "changes in action" or "changes in condition." In this water use efficiency project, an appropriate "change in action" goal could be:

Goal 2: Water use efficiency information will be provided at one half of Extension-organized crop management workshops and field days.

In this project, an appropriate "change in condition" goal could be:

Goal 3: In Colorado dryland production, a rotational crop will be planted on 10% of the acres now planted to wheat, thus improving the overall diversity of the cropping system and its productivity.

Not all projects are expected to have goals that lead directly to a near-term impact such as changing the cultivars planted by farmers. Examples might be a project with a goal of developing a processed based model of soil organic matter and a project with a goal of defining the function of maternal nutritional status and its impact on fetal/neonatal growth and performance in livestock. Nonetheless, such projects can have goals and objectives leading to “change in action” and “change in condition” impacts.

In the soil organic matter example, a “change in action” goal could be

Goal 4: One half of future Extension-organized crop management workshops and field days will provide content related to the development of soil organic matter.

A “change in condition” goal could be

Goal 5: 20% of agricultural consultants participating in an Extension-organized workshop will learn of the research on model development and will understand the importance of the research findings to their clientele.

Another example of a goal leading to a “change in condition” outcome for the soil organic matter project could be

Goal 6: 50% of high school biology students who participate in hands-on workshops conducted by CSU faculty and students will improve their understanding of the role of soil organic matter in plant growth.]

1. **Reasons for undertaking work:**
2. Importance of the problem:
3. Expected outputs and products:
4. Expected outcomes and impacts:
5. **Previous work and present outlook (including bibliography):**

[Briefly review the history and important contributions to the project’s area of research. Include current research directions, a statement addressing how your work will contribute, and references.]

References Cited

1. **Procedure:**

[For each objective, describe the ways in which the project will be conducted, with emphasis on the general scientific methods and any unique aspects or significant departures from usual methods.

There are many appropriate procedures for change in action or change in condition goal(s) and objective(s). A few examples include:

* 1. collaborating with an Extension Specialist to provide project-related information in workshops and publications,
	2. presenting project-related information to high school students, and
	3. developing and maintaining a website containing project-related information and applications.]

1. **Project duration:** July 1, 20xx - June 30, 20xx
2. **Estimated budgets:**

[Subsection A is to be completed by Dean/Department Head -- Describe how the college/department AES allocation will be used to support this project.]

[Subsection B is to be completed by the Project Director – Describe a plan for securing funding to support any work that you propose to undertake that cannot be completed with available Hatch funding described in Subsection A. Identify potential sources of funding for specific parts of the project and the timetable envisioned for being able to obtain the needed support.]

1. **Personnel and Department(s) Involved:**

[Provide the names of CSU faculty and staff who will be involved in the project, including their departmental affiliation and type of involvement.]

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|  |  | **In Capacity of**  |
| **Leader (s) and Degree** | **Department** | **Participant** | **Advisor** |
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|  |  |  |  |
| **Other Personnel** |  |  |  |
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1. **Cooperation extended other than that of Department(s) listed above:**

[List the affiliations of project cooperators and the nature of their contributions.]

|  |  |  |
| --- | --- | --- |
| **Entity** |  | **Extent of Cooperation** |
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1. **Required Signatures**

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Project Director 1 Date Project Director 2 Date

**Recommended for Approval:**

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Department Head 1 Date Department Head 2 Date

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Dean Date

**Approved:**

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Deputy Director Date

Agricultural Experiment Station

Colorado State University