

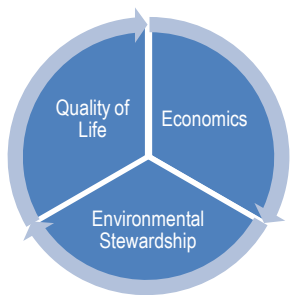
# PLANNING FOR A SUSTAINABLE HOMESTEAD

APRIL 2010

- ❖ *This worksheet can be used by itself, or can accompany the “Planning for a Sustainable Homestead” webinar available at the Small Acreage Management website [www.ext.colostate.edu/sam](http://www.ext.colostate.edu/sam)*

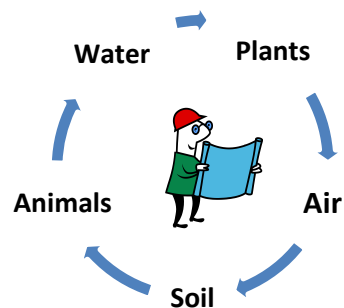
Whether you own undeveloped land, or property with an existing house and improvements, a management plan is essential. This worksheet will guide you through developing your land use and management goals, mapping your property, and inventorying the natural resources and structures on your property.

## Sustainability



According to the U.S. EPA, *sustainability* means “meeting the needs of the present without compromising the ability of future generations to meet their own needs.”

## Environmental Stewardship



*Environmental stewardship* can be defined as “The practice of carefully managing land usage to ensure natural systems are maintained or enhanced for future generations.”

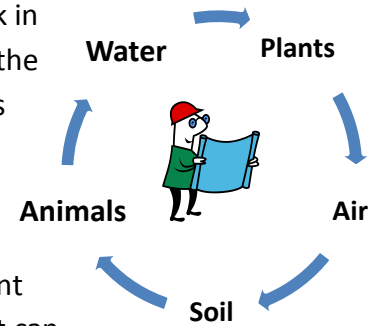
## Why Develop a Management Plan?

- To ensure environmental stewardship
- To create sustainability by considering all aspects (environmental goals, economic factors, and quality of life)
- To make management easier
- To save money and avoid problems
- To help you make decisions

## Vision and Goals

To begin with, develop your vision of how you want your land to look in the coming years. You may want to improve conditions or maintain the land as it is. Whatever your goals are, planning for specific outcomes will help you make good decisions now and in the future.

1. **Record your vision.** You may start by answering these questions: Why do you own your property? What do you want from your property? How do you plan to use the land? What can your land support?

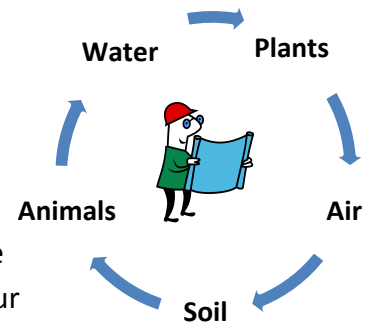


### **Vision for your land in 5 to 10 years:**

*Example: Our vision is that we are able to keep and graze four horses while protecting the condition of our pasture grasses and soil. The manure is composted properly and used in our garden. Weeds have been eliminated and/or controlled on our property. We have established a windbreak in the southeast corner of the property. We have established native landscaping around the house, and a productive garden.*

2. **Identify specific land management goals that relate to your overall vision.**

Use the table below to help you consider additional goals that you'd like to accomplish. Suggested short term actions are provided to help you focus and prioritize your efforts to reach each long term goal. Circle those that apply to you and then use the blank space to list additional actions and goals related to your property.



Long-Term Goals		Short-Term Actions
<input type="checkbox"/>	<b>Soil:</b> Build healthy soils.	<ul style="list-style-type: none"> <li>• Do regular soil tests</li> <li>• Add organic matter to my soil (cover crops and compost)</li> <li>• Reduce the use of synthetic-based chemicals to protect soil biota</li> <li>• Reduce soil compacting activities when soils are wet</li> <li>• Reduce soil erosion by wind and water</li> <li>•</li> <li>•</li> <li>•</li> <li>•</li> </ul>
<input type="checkbox"/>	<b>Plants:</b> Improve or maintain the aesthetic beauty of the property by managing sustainable plants.	<ul style="list-style-type: none"> <li>• Assess existing vegetation</li> <li>• Identify and control noxious weeds and other pests</li> <li>• Establish healthy and diverse plant communities and a scenic landscape.</li> <li>• Maintain vegetative cover, bare soil is minimized to reduce soil blowing.</li> <li>• Plant native species.</li> <li>•</li> <li>•</li> <li>•</li> <li>•</li> </ul>

<input type="checkbox"/>	<p><b>Water:</b> Protect the water quality and quantity in local streams, groundwater sources, and other water bodies.</p>	<ul style="list-style-type: none"> <li>• Test my well water every year for potential contaminants.</li> <li>• Store manure, fertilizers, and other potential pollutants on impermeable surfaces and away from the well or other water sources.</li> <li>• Conserve water by irrigating according to plant needs and planting drought tolerant plants.</li> <li>• Properly maintain and update my irrigation system for maximum efficiency. Consider doing an irrigation audit.</li> <li>•</li> <li>•</li> <li>•</li> </ul>
<input type="checkbox"/>	<p><b>Animals:</b> Keep healthy horses or other livestock on the property.</p>	<ul style="list-style-type: none"> <li>• Keep animals healthy with proper diet and condition.</li> <li>• Determine how you will manage dead animals.</li> <li>• Protect streams and streambanks from animal manure and trampling.</li> <li>• Manage manure by composting or proper disposal.</li> <li>• Manage livestock odors appropriately for the area.</li> <li>• Keep pasture grasses healthy by not overgrazing.</li> <li>•</li> <li>•</li> <li>•</li> </ul>
<input type="checkbox"/>	<p><b>Wildlife:</b> Provide healthy habitats for desired wildlife, and effectively manage unwanted wildlife.</p>	<ul style="list-style-type: none"> <li>• Establish natural cover and nesting habitat for desired wildlife species.</li> <li>• Make food and water sources available for desired wildlife.</li> <li>• Install wildlife friendly fencing.</li> <li>• Learn more about controlling prairie dogs.</li> <li>•</li> <li>•</li> <li>•</li> </ul>
<input type="checkbox"/>	<p><b>Forests:</b> Manage trees to reduce the risk of pest, disease, and fire damage.</p>	<ul style="list-style-type: none"> <li>• Create a forest management plan to meet my goals.</li> <li>• Establish defensible space to protect my home from wildfire.</li> <li>•</li> <li>•</li> <li>•</li> </ul>

<input type="checkbox"/>	<b>Air:</b> Promote clean air quality through the products, equipment, or energy I choose to use.	<ul style="list-style-type: none"> <li>• Do an energy audit</li> <li>• Upgrade old tractor or car engines.</li> <li>•</li> <li>•</li> <li>•</li> </ul>
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For more info on all these topics, visit the CSU Extension Small Acreage Management website [www.ext.colostate.edu/sam](http://www.ext.colostate.edu/sam)

## Mapping Your Property

The next step in designing your management plan is to inventory the features and land uses of your property on a map. The map you create will be your reference point for planning future activities, such as placement of fences or tree plantings. Keep the map as a record and as you implement changes, update your map.

To create your map, use an aerial image from the *Web Soil Survey*, or another map source. Then mark the following on to the map:

- property boundaries
- land uses (such as pasture, garden, manure pile, wildlife plot, windbreak). Include neighboring land uses if it may affect you in some way
- fences, corrals, water troughs, gates
- existing structures such as outbuildings or greenhouses
- utilities (wells, septic system, power and telephone lines, etc) above and below the ground
- streams, wetlands, ponds, ditches
- adjacent roads, driveways, or easements
- bare ground, weedy areas, or other problem areas

### Using the Web Soil Survey

*Web Soil Survey* is a free online natural resource information system available at <http://websoilsurvey.nrcs.usda.gov/app/>

You can do more than generate a map of your property using the *Web Soil Survey*. Go to the **Suitabilities and Limitations for Use** section under the **Soil Data Explorer** tab. The information available here includes:

**Building Site Development:** Maps and reports with information on soil limitations for home sites.

**Land Classification:** Maps and reports for farmland classification to identify areas of prime farmland or Capability Class (a ranking of soil suitability for cropland).

**Vegetative Productivity:** Maps and reports of expected crop yields for a variety of crops including hay and pasture.

## Inventorizing Your Resources

Now that you have mapped your property, use this worksheet to capture more detailed information about each distinct section of your property. This activity will help you pinpoint limitations, determine what activities your land can support, and identify/prioritize maintenance concerns and other action items.

### Consider Your Limitations

- Consider neighboring land uses and how that may affect your vision.
- Check with your county about zoning, building codes, and other local regulations which might require permits or govern land uses.
- Understand your water rights.
- Consider financial commitments such as maintenance or ongoing costs.
- Consider time and labor required for your plans. How will it affect your quality of life?

**Field/Land Use:** List each distinct section of your property and its major land use.

**Acres:** List the approximate size of each area.

**Soil:** Use Web Soil Survey to look up your soil types online. Information on using the web soil survey can be found on the home page, or contact your local NRCS (USDA-Natural Resources Conservation Service) office.

**Concerns:** Note specific improvements which you'd like to make. You may also include details such as resource concerns, seasonal problems, maintenance and production issues.

### Natural Resource Inventory *EXAMPLE*

<i>Field/Land Use</i>	<i>Acres</i>	<i>Soil Type &amp; Characteristics (from websoil survey)</i>	<i>Concerns (natural resources, maintenance, other)</i>
<i>Pasture</i>	<i>15</i>	<i>Stoneham loam, 3-8% slopes Adena-Colby association, gently sloping</i>	<i>Control redroot pigweed and Canada thistle Establish rotational grazing</i>
<i>Headquarters</i>	<i>2.5</i>	<i>Weld loam, 1-3% slopes</i>	<i>Build some raised beds for vegetables Plant drought tolerant landscape plants</i>
<i>Forest</i>	<i>5</i>	<i>Henderson stony sandy loam, 10-15% slopes</i>	<i>Develop a wildfire management plan</i>



## Natural Resource Inventory

Site

Date

Field/Land Use	Acres	Soil Type & Characteristics <i>(from websoil survey)</i>	Concerns (natural resources, maintenance, other)

**Keep Records and Update Your Goals**

- Use photos to document improvements and progress
- Keep detailed records of what, where, when, and how (helpful for activities such as weed or pest control, gardening or farming crop rotations, and soil, water, and manure testing).

