



Conducting Resource Inventories

Step
3

USDA • Natural Resources Conservation Service • July 1999

What is it?

“Resource inventories” are information about current conditions in the planning area. Resource inventories detail the condition of soil, water, air, plant, animal and human resources (SWAPA+H).

Why is it important?

Resource inventories provide factual, objective data about the planning area, and are vital for sound decision-making. Resource inventories are needed to determine the severity of resource concerns, identify opportunities for improvement, and determine which strategies may be most appropriate given conditions in the planning area. They help local stakeholders understand the human interaction with the environment, and interrelationships among resources in the planning area. Inventories provide a description of current conditions— called “benchmarks”— which are compared with future conditions desired by the Planning Committee. Inventories are also used to forecast potential impacts resulting from various resource management alternatives.

When do we do it?

Resource inventories are compiled after the Planning Committee has identified the resource concerns and objectives in the planning area. This is Step 3 of Phase One of the resource planning process.

How do we do it?

The Technical Advisory Committee (TAC) is primarily responsible for compiling resource inventories. They are occasionally assisted by members of the Planning Committee. At a minimum, the Planning Committee should advise the TAC on where they believe problems are occurring, the severity of problems, and any questions they have about the resource concerns (see “Determining Objectives”). The TAC and the Planning Committee should communicate throughout the inventory work.

Technical advisors use various methods and procedures to collect inventory data. Inventory methodology is not detailed in this fact sheet. Instead, page 2 of this fact sheet lists typical inventories that are conducted and the specialists who can help get them done.

In addition to conducting inventories for resources related to the concerns and opportunities identified by the Planning Committee, the TAC may suggest more areas that need to be investigated. The scoping process (see fact sheet, “Scoping the Planning Process”) helps to identify which inventories need to be conducted.

Potential Inventories and their Characteristics

SOIL--

Erosion- Sheet and Rill Erosion, Ephemeral Erosion, Classic Gully Erosion, Streambank Erosion, Scour Erosion, Road Banks, and Construction Site Erosion, Wind Erosion

Condition- Soil Tilth, Soil Compaction, Soil Contaminants (Chemical, Animal Waste, Fertilizer, Pesticide)

Deposition- Onsite and Offsite Damages, Onsite and Offsite Safety Issues

Specialists who can assist with inventories:

NRCS State Geologist, NRCS State Soil Scientist, NRCS State Agronomist, NRCS Planning Engineers, NRCS State Streambank Stabilization Specialist, NRCS FOD Resource Soil Scientist, NRCS FOD Agronomist/Water Quality Specialist, NRCS FOD Engineer, Univ. of IL Cooperative Extension, Natural Resource Management Specialist, IDOA BLWR Watershed Management Specialist, IDOA, BLWR Sustainable Agriculture Specialist.

WATER--

Quantity- Excess Amounts, Inadequate Outlets, Deficient Amounts, Restricted Capacity Water Bodies, Streams, Lakes

Quality - Chemical, Physical and Biological conditions:
Groundwater-Pesticides, Nutrients, Salinity, Heavy Metals, Pathogens

Surface Water-Pesticides, Nutrients, Pathogens, Sediment, Low Dissolved, Oxygen, Salinity, Heavy Metals, Temperature

Specialists who can assist with inventories:

NRCS State Water Quality Specialist, NRCS State Environmental Specialist, NRCS State Biologist, NRCS FOD Biologist, NRCS FOD Agronomist/Water Quality Specialist, NRCS Engineers, IL State Water Survey Geologist, IL State Geological Survey Geologist, IL EPA, US EPA, IDNR Ground Water Specialist, IDNR EcoWatch Program coordinators, Local EcoWatch Volunteers.

AIR--

Quality

- Particulates
- Odors
- Chemical Drift
- Fungi, Molds, & Pollens

Specialists who can assist with inventories:

IDOA Livestock Specialist, IEPA, US Fish and Wildlife Service, Local County Health Department

PLANTS--

Suitability

Plants are unsuitable, Adaptability

Condition

Productivity, Health and Vigor

Management

Establishment, Growth and Harvest, Nutrient Management, Pests

Threatened and Endangered Species

Environmental Evaluations

Grassing Land Management Evaluations

Specialists who can assist with inventories:

NRCS Agroforester, NRCS State Biologist, NRCS State Environmental Specialist, NRCS FOD Biologist, NRCS Grazing Land Specialist, Illinois Natural History Survey Biologists, IDNR Wildlife Biologists, IDNR Fisheries Biologist.

ANIMALS--

Habitat

Food, Wildlife Habitat, Cover and Shelter, Quantity and Quality of Drinking Water

Management

Population/Resource Balance, Animal Health

Threatened and Endangered Species

Environmental Evaluations

Specialists who can assist with inventories:

NRCS State Biologist, NRCS State Environmental Specialist, NRCS FOD Biologist, NRCS Grazing Land Specialist, University of IL Cooperative Extension Livestock Production Specialist, IDNR Wildlife Biologists and the IDNR Fisheries Biologist.

HUMAN FACTORS--

Social and Economics Considerations- Cost

Effectiveness, Financial Conditions, Market Conditions, USDA Farm Programs, Sustainability of Ag Systems, Attitudes, Values, Public Health and Safety, Client Characteristics, Client Expectations, Risk Tolerance or Aversion, Employment Trends, Population Trends, Land Use Trends, Acceptability of Alternatives, Farmland Protection

Cultural Considerations- Absence or Presence of artifacts, Significance of Artifacts Present, Effects of Alternatives

Specialists who can assist with inventories:

NRCS State Economist, NRCS Agricultural Economist, NRCS State Sociologist, NRCS State Archeologist, NRCS Field Cultural Resources Coordinators.

Additional Considerations

Before beginning inventory work, the TAC reviews existing data. For example, look at previously-developed resource plans, community plans, demographic studies, and floodplain studies. In some cases, data from these studies only needs to be updated for current conditions.

Occasionally, cost considerations or lack of technical staff make it impossible to gather all the information needed for a full inventory of certain resources. In these situations, the TAC makes the recommendation that funding should be sought to complete the inventory. A typical example is when a watershed lacks a hydrologic model to accurately assess the impact of various flood-mitigation measures. The TAC might identify general strategies for reducing flooding, but also recommend that a hydrologic model eventually be developed to better gauge the impacts of each alternative.

The inventory process includes documenting the data found. Worksheets help the TAC document the inventory data in an easy-to-understand format. Examples of these worksheets are: the Problems Identification Worksheet that is contained in the NRCS Field Office Technical Guide, the Woodland Planning Worksheet, the Sheet and Rill Erosion Worksheet, or the Grazing Land Evaluation Worksheet.

Inventory documentation includes a description of the methodology used to complete the inventories, a detailed description of the TAC findings and interpretation of results, and identification of additional information, if any, that needs to be collected in subsequent studies. This inventory information is reviewed by the Planning Committee.

For more information

For additional guidance on conducting resource inventories, see the NRCS Field Office Technical Guide (FOTG). Also contact NRCS resource specialists for assistance.

The Next Step

As inventory information is compiled, the data needs to be analyzed. See fact sheet, "Analyzing Resource Data " for more information about Step 4.