

Section 8 of 22 (8a - Planning for Irrigation Water Management)

The Natural Resources Conservation Service provides technical assistance in planning and designing irrigation systems with landowners. This planning process includes the following steps:

- 1. Identify resources of concern, 2. Determine irrigator objectives, 3. Inventory resources, 4. Analyze resource data, 5. Formulate irrigation alternatives, 6. Evaluate alternatives, 7. Document decisions, 8. Water user implements irrigation plan, 9. Follow-up.

CONSIDERATIONS FOR PLANNING AN IRRIGATION SYSTEM

Some of the major items to consider in planning an on-farm irrigation system are:

- Water Quantity Available – How much water is available for irrigation and when is it available?
- Water Quantity Needed – Is there adequate water available to meet the demand of the crops to be grown while considering the irrigation efficiency?
- Water Quality – Is the salinity, pH and mineral content of the water compatible with the planned crops and irrigation method?
- Irrigation Method – Is the proposed irrigation method compatible for the crop to be grown?
- Soil Type – Is the proposed irrigation method compatible with the soil type, in terms of infiltration rate, water holding capacity, and stratification that may exist in the soil profile?

On lands used primarily for field and forage crop production, orchards, and ornamental crops, the producer's inputs and management practices may have a significant impact on the current and future conditions of Soil, Water, Air, Plant, Animal and Human (SWAPA + H). As well as soils, rainfall and other natural resource information, cropland inventory needs to include a description of current crops, crop rotations, tillage operations, nutrient and pest management inputs, livestock numbers and class, available equipment, and the timing and management of other important activities. The best source for this information is the client and is best collected when the client and the planner work together on-site in the planning area (field, tract or farm). A successful inventory process will "set the stage" for planning steps 4. Analyze Resource Data, 5. Formulate Alternatives, 6. Evaluate Alternatives, and 7. Make Decisions. The overall Cropland Inventory Worksheets (Agronomy Tech Note 70, <http://www.nm.nrcs.usda.gov/technical/tech-notes/agro/ag70.doc>) and the IWM Inventory (in the following section) can be used.

Agronomy Tech Note 76 (<http://www.nm.nrcs.usda.gov/technical/handbooks/iwm/nmiwm.html>)