Irrigation System Planning

Introduction

- The material provided in this section is intended to serve as a framework for conservation irrigation system planning.
- Training emphasizes the basic steps in the irrigation planning process in development of ecosystem based management systems.
- Trainers should modify the training material referenced as necessary to achieve the planned skill level for the trainees.
- Trainers are encouraged to include locally developed training materials to complement and/or supplement the referenced material.
- As new training materials are developed by trainers, they are encouraged to furnish copies to the National Employee Development Center for inclusion in future versions of the assembled material.

Suggested Objectives


Suggested Outline

I. Introduction
II. Body
   A. Planning
      1. Identify resources of concern.
      2. Determine irrigator objectives.
      3. Inventory resources.
      4. Analyze resource data.
      5. Formulate irrigation alternatives.
      8. Water user implements irrigation plan.
      9. Follow-up.
III. Summary
Irrigation System Planning

Irrigation Methods That Will Be Covered

1. Sprinkler Irrigation Systems
2. Surface Irrigation Systems
3. Trickle Irrigation Systems
4. Subsurface Irrigation Systems
5. Fertigation/Chemigation Systems

1. Sprinkler Irrigation Systems

Reference Material

- NEH 15, Chapters 3, 11.
- Applicable State Irrigation Guides.
- Field Office Technical Guide, Section 3 and 5.

Toolbox Material

- Publication “Planning for an Irrigation System”, Irrigation Association
- Video “Best Management Practices For Sediment Reduction Within Western Stanislaus County”, NRCS, CA
- Video “Conservation Irrigation for New Employees”, NRCS, Module 7.3, Parts A, B and C
- Video “LEPA - Saving Water for Future Producers”, Texas Agricultural Extension Service/Texas A&M University
- Video “No Water - No Future, Key to Effective Water Management”, Irrigation Association.
Irrigation System Planning

2. Surface Irrigation Systems

Reference Material

- NEH 15, Chapters 3, 4, 5, 6.
- Applicable State Irrigation Guides.
- Field Office Technical Guide, Section 3 and 5.

Toolbox Material

- Publication “Planning for an Irrigation System”, AAVIM Manual,
- Video “Best Management Practices For Sediment Reduction Within Western Stanislaus County”, NRCS, CA.
- Videos “Conservation Irrigation Planning for New Employees” (3 videos, NRCS), Module 7.3, Parts A,B,C.
- Video “No Water-No Future, Key to Effective Water Management”, Irrigation Association.
Irrigation System Planning

3. Trickle Irrigation Systems

Reference Material

- NEH 15, Chapters 3, 7.
- Applicable State Irrigation Guides.
- Field Office Technical Guide, Section 3 and 5.

Toolbox Material

Videos: Conservation Irrigation Planning for New Employees (3 videos, NRCS), Module 7.3, Parts A, B, C.
Irrigation System Planning

4. Subsurface Irrigation Systems

Reference Material:

- NEH 16, Drainage (Will be replaced by NEH Part 624, Water Table Control).
- NEH Part 624, Water Table Control (Draft).
- NEH 15, Irrigation, Chapter 3.
- Applicable State Irrigation Guides.
- Field Office Technical Guide, Section 3 and 5.

Toolbox Material

- Videos  “Conservation Irrigation Planning for New Employees” (3 videos, NRCS), Module 7.3, Parts A,B,C.
- Video  “No Water -No Future, Key to Effective Water Management”, Irrigation Association.
Irrigation System Planning

5. Fertigation/Chemigation Planning

Reference Material

- Irrigation Guide, Chapter 7, 10, 15.
- NEH 15, Chapters 7, 11.
- Applicable State Irrigation Guides.
- Applicable State Chemigation/Fertigation Guides.
- Field Office Technical Guide, Section 3 and 5.
- “General Chemigation/Product Combination”, (Video), Agri Inject Inc.
- “Fertigation”, (Video), International Irrigation Center, Israel.

Toolbox material


Facilitation Options

- Self-paced,
- Facilitator guided, or
- Formal training course.

Evaluation
Irrigation System Planning

Each state should develop an evaluation procedure which addresses the level of competence before and after training.