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# Irrigation Training Toolbox

## Contents Of Toolbox by Sections

### 1. Soil-Water-Plant Relationship

- Publication “The Surface Irrigation Manual”, Chapter 1, Cal-Poly
- Publication “How Water Moves Through Soil”, University of Arizona/NRCS (2/98)
- Lesson Plan “Soil-Water Relationship”, NRCS
- Lesson Plan “Water Intake”, NRCS
- Lesson Plan “Plant-Water-Soil Relationships”, NRCS
- Lesson Plan “Drainage Primer”, NRCS
- Lesson Plan “Water Movement Through Soils”, NRCS
- Videos “Plant Soil-Water Relationships”, Certified Irrigation Designers Step 2 Study Guide, Volume 2, Cal-Poly
- Video “How Water Moves Through Soil”, University of Arizona/NRCS
- CD Rom “Water & Plant Relationship”, EduSelf multimedia (7/97)

### 2. Irrigation System Planning

- Publication “Drip and Microirrigation for Trees, Vines, and Row Crops”, ITRC, Cal-Poly (Located in Irrigation System Design Toolbox)
- Publication “Fertigation”, ITRC, Cal-Poly (Located in Irrigation System Design Toolbox)
- Publication “Planning for an Irrigation System”, Irrigation Association
- Publication “The Surface Irrigation Manual”, Chapter 1, Cal-Poly (Located in the Soil-Water-Plant Relationship Toolbox)
- Publication “Managing Irrigation and Nitrogen to Protect Water Quality”. University of Nebraska Cooperative Extension, EC99-786-S
- Publication “Sprinkler Irrigation Systems”, Midwest Planning Service, MWPS –30, 1999
- Video “Conservation Irrigation for New Employees”, NRCS, Module 7.3, Parts A, B and C
- Video “Best Management Practices For Sediment Reduction Within Western Stanislaus County”, NRCS, CA
- Video “No Water - No Future, Key to Effective Water Management”, Irrigation Association.
- Video “Sand Media Filtration for Drip and Microirrigation”, ITRC, Cal-Poly
- Video “General Filtration for Drip and Microirrigation”, ITRC, Cal-Poly

- Video “LEPA - Saving Water for Future Producers”, Texas Agricultural Extension Service/Texas A&M University
- CD Rom “Irrigation Systems”, EduSelf multimedia (7/97)

### 3. Irrigation System Design

- Publication “Drip and Microirrigation for Trees, Vines, and Row Crops”, ITRC, Cal-Poly
- Publication “Fertigation”, ITRC, Cal-Poly
- Publication “Irrrometer Design Manual” (Packet of material in folder), Irrrometer Company
- Publication “Precipitation Rates and Sprinkler Irrigation” - Student and Instructor Manuals, Hunter Industries
- Publication “Irrigation Hydraulics” - Student and Instructor Manuals, Hunter Industries
- Publication “The Surface Irrigation Manual”, Chapter 1, Cal-Poly (Located in the Soil-Water-Plant Relationship Toolbox)
- Publication “Understanding Pumps”, Irrigation Association
- Publication “Sprinkler and Trickle Irrigation”, Jack Keller and Ron D. Bliesner, Blackburn Press, 2000
- Publication “Sprinkler Irrigation Systems”, Midwest Planning Service, MWPS –30, 1999 ( Located in the Irrigation System Planning Toolbox)
- Publication “Managing Irrigation and Nitrogen to Protect Water Quality”. University of Nebraska Cooperative Extension, EC99-786-S (Located in the Irrigation System Planning Toolbox)
- Lesson Plan “Sprinkler Design Problem”, NRCS, KS
- Lesson Plan “Selecting Sprinkler Packages for Center Pivots”, Nebraska Irrigation Guide
- Lesson Plan “CPNOZZLE Program”, NRCS
- Video “Principles of Well Location” - Module 5, Private Rural Well Protection Program, NRCS
- Video “Well Design and Construction” - Module 6, Private Rural Well Protection, NRCS
- Video “Pump Selection, Application and Use”, Certified Irrigation Designer’s Video Series, Step 2, VEP, Cal-Poly
- Video “Sand Media Filtration for Drip and Microirrigation”, ITRC, Cal-Poly
- Video “General Filtration for Drip and Microirrigation”, ITRC, Cal-Poly
- Video “LEPA - Saving Water for Future Producers”, Texas Agricultural Extension Service/Texas A&M University
- Video Surface Irrigation / Riego Superficial, “Saving Water in Agriculture”, NRCS, New Mexico
- CD Rom “Fertilization (Fertigation)”, EduSelf multimedia (2/98)

- CD Rom (8/06) “Managing Irrigation and Nitrogen to Protect Water Quality”
  - DVD “Assuring Efficient Center Pivot Irrigation” (8/06)
- 4. Water Measurement**
- Publication “Flow Measuring Flumes For Open Channel Systems”, ASAE
  - Video “Step Out of The Stone Ages, Water Works: A Guide to Effective Water Measurement”, US Bureau of Reclamation.
  - Publication “Water Measurement Manual”, US Bureau of Reclamation (2/98)
  - Publication “Water Measurement with Flumes and Weirs”, ILRI publication 58 (10/03)
  - Video “Irrigation Flow Measurement in Piped Systems”, US Bureau of Reclamation. (10/03)
- 5. Irrigation Scheduling**
- Publication “Irrigation Scheduling: A Water Quality Must!”, NRCS, Franklin Conservation District, Pasco, WA
  - Publication “Scheduling Irrigations: A Guide For Improved Irrigation Water Management Through Proper Timing and Amount of Water Application”, SCS, ARS, Cooperative Extension, CO
  - Publication “Crop Evapotranspiration – Guidelines for Computing Crop Water Requirements”, FAO Irrigation and Drainage Paper 56, 1998.
  - Videos “Introducing Irrigation Scheduler”, IMC, Michigan State University, MI
  - Video “Agricultural Irrigation Scheduling - The Irrrometer Story”, Irrrometer Company
- 6. Soil Moisture Measurement**
- Publication “Estimating Soil Moisture By Feel and Appearance”, Water Management Note, High Plains Underground Water Conservation District No. 1
  - Publication “Neutron Moisture Meters: The Scientific Approach to Monitoring Soil Moisture”, Water Management Note, High Plains Underground Water Conservation District No. 1
  - Publication “Irrigating By The Block: Soil Moisture Blocks and Resistance Meters”, Water Management Note, High Plains Underground Water Conservation District No. 1
  - Publication “Soil Moisture Monitoring: Overview of Monitoring Methods and Devices”, Water Management Note, High Plains Underground Water Conservation District No. 1
  - Publication “Tensiometers: A Gauge For Measuring Soil Moisture”, Water Management Note, High Plains Underground Water Conservation District No. 1

- Publication “Tensiometer Use in Scheduling Irrigation”, Irrigation Management Series, Kansas State University, Cooperative Extension Service
- Publication “Soil Water Measurements: An Aid to Irrigation Water Management”, Irrigation Management Series, Kansas State University, Cooperative Extension Service
- Publication “The Montana Irrigator’s Pocket Guide”, MT Dept. of Environmental Quality
- Publication “Estimating Soil Moisture by Feel and Appearance”, USDA-NRCS Program Aid 1619, 1998
- Publication “Calculo de la Humedad del Suelo por Tacto y Apariencia” USDA-NRCS Program Aid 1619-SP
- Video: “REFLECTIONS - Soil Moisture Monitoring”, NRCS, NM
- Video “Agricultural Irrigation Scheduling - The Irrrometer Story”, Irrrometer Company (Located in Irrigation Scheduling Toolbox)

## 7. IWM Plan

- Lesson Plan “Water Management for Water Quality Protection and Water Conservation”, NRCS
- Lesson Plan “Irrigation Water Management Plan”, NRCS, Florida
- Lesson Plan “QT=DA”, NRCS, Nebraska
- Lesson Plan “Planning and Applying Conservation Practices”, NRCS
- Lesson Plan “USDA-SCS Fact Sheets”, NRCS
- Lesson Plan “Measuring the Flow From the Water Source”, NRCS
- Lesson Plan “IWM Conservation Irrigation Farm Plans”, NRCS
- Lesson Plan “IWM Sample Plan”, NRCS
- Lesson Plan “IWM Sample Plan Blank”, NRCS
- Lesson Plan “IWM Samples, Modified Blaney-Criddle Consumptive Use Computations”, NRCS
- Publication “Managing Irrigation and Nitrogen to Protect Water Quality”. University of Nebraska Cooperative Extension, EC99-786-S (Located in the Irrigation System Planning Toolbox)
- Video “Irrigation Management”, Oklahoma State University
- Video “Irrigation Energy Conservation”, Oklahoma State University
- Video “Micro Irrigation Management”, Richard J. Salty Productions, Burbank, CA
- Video “Introduction to Ground Water Quality Improvements in Irrigated Agriculture”, University of Nebraska
- Video “How Chemicals Move Through Soil”, University of Arizona/NRCS (2/98)
- Slides “Agrichemical Water Quality Training Series - Protection and Water Conservation”, NRCS

## 8. Irrigation System Evaluation

- Publication and Audio Tape: Trickle Irrigation System Evaluation - Field Guide
- Publication “Module 910 - Level Border Irrigation Evaluation”, NRCS
- Publication “Module 911 - Graded Border Irrigation Evaluation”, NRCS
- Lesson Plans: “Efficiencies”, NRCS
- Lesson Plan “Evaluation of Subirrigation Systems”, NRCS, FL
- Lesson Plan “Evaluating Data Obtained From a Border Irrigation”, NRCS
- Lesson Plan “Gathering Data for Evaluating a Border Irrigation”, NRCS
- Lesson Plan “Pumping Plant Evaluation”, Irrigation Training Series”, Module 950 (DRAFT), NRCS
- Lesson Plan “Evaluation of Center Pivot System”, NRCS, FL
- Lesson Plan “Evaluating Data Obtained From a Sprinkler Irrigation”, NRCS
- Lesson Plan “Data Gathering and Acquisition Methods”, NRCS
- Lesson Plan “Gathering Data for Evaluating Furrow or Corrugation Irrigation”, NRCS, OR
- Lesson Plan “Evaluating Data Obtained From a Furrow or Corrugation Irrigation”, NRCS
- Lesson Plan “Gathering Data for Evaluating a Sprinkler Irrigation”, NRCS
- Lesson Plan “Evaluation of a Trickle Irrigation System”, NRCS, FL
- Lesson Plan “Evaluation of a Traveling Gun Sprinkler Irrigation System”, Lesson Plan Outline, NRCS, FL
- Lesson Plan “Evaluation of a Fixed (Solid Set) Sprinkler System”, NRCS, FL
- Lesson Plan “Troubleshooting”, NRCS
- Lesson Plan Safety Considerations in Evaluating Natural Gas and Electric Pumping Plants”, NRCS
- Publication “Farm Irrigation System Evaluation: A Guide for Management”, Utah State University
- Publication “Technical Note Series No. 707 - Engineering”, NRCS
- Video “Level Border Irrigation Evaluation”, Irrigation Training Series, Module 910, NRCS
- Video “Center Pivot Sprinkler Irrigation Evaluation” (2), Irrigation Training Series, Module 931, NRCS, with Video, Parts A, B and C
- Video “Periodic Move Sprinkler Irrigation Evaluation”, Irrigation Training Series, Module 930 (DRAFT), NRCS
- Video “Graded Border Irrigation Evaluation”, Irrigation Training Series, Module 911, NRCS, Parts A and B
- Video “Level Border Irrigation Evaluation”, Irrigation Training Series, Module 910, NRCS
- Slides “Fighting Irrigation Induced Erosion”, USDA – Agricultural Research Service (5/97)