

## PART 523 – IRRIGATION

WA523.06(a)(3)

### WA523.06 Irrigation Systems

#### (a) General

- (1) It is NRCS policy in the state of Washington to plan, design, and install irrigation systems that maintain adequate soil moisture for optimum plant growth without causing excessive water loss, erosion or a reduction in water quality. The National Irrigation Handbook Part 652, Irrigation Guide, has Washington Supplements to provide tools and resources for use with applicable practice standards and specifications, for planning and evaluating irrigation systems.
- (2) All systems shall be evaluated with computer software (SRFR for surface systems, CPED for center pivots) to determine uniformity of application and adequacy of irrigation. Efficiency values are located in the Washington Irrigation Guide, Section 6, Table WA6-2. For systems not listed, use acceptable industry standards.
- (3) Other reference material is available in the National Engineering Handbook (NEH), Section 15.

NEH Chapters available include:

- 1 – Soil-Plant-Water Relationships
- 2 - Irrigation Water Requirements
- 3- Planning Farm Irrigation Systems
- 4- Border Irrigation
- 5 – Furrow Irrigation
- 6 – Contour Levee Irrigation
- 7- Trickle Irrigation
- 8 – Irrigation Pumping Plants
- 9 – Water Measurement
- 11 – Sprinkler Irrigation

Chapters are available online at:

<http://www.info.usda.gov/CED/Default.cfm?xSbj=58&xAud=24>

(4) Other software available on NRCS computers include:

**AgPipe** – to assist in design of pipe sizes

**CPED** – for center pivot and linear sprinkler systems evaluation

**FIRI** – a rating index program for irrigated farms

**Hydraulic Formulas** – quick calculations of different hydraulic conditions

**IWR** – a method to calculate crop water use by the Blaney Criddle equation.

**SRFR** – Surface irrigation program

**WinFlume** – a ramp flume design program

**Soil Water Characteristics** – the texture triangle with water hold information