

General

Irrigation Consumer Bill of Rights™

Note: This supplements various Bills™ written for specific irrigation methods. Discuss these items with your irrigation dealer before purchasing your irrigation system. The discussion will help you to make wiser selections of design options, and to appreciate the obligations of both yourself and the dealer in creating your irrigation system.

Designer Qualifications

- What are the dealer credentials (formal training, references, designer certification by The Irrigation Association, contractor's license, and/or professional agricultural engineer registration)?

Design Features (General)

- What is the life expectancy of system components?
- What safety features have been included?
- What are the options for future upgrades?
- What is the recommended list of spare parts?

Specific Operating/Design Parameters

- What will be the Distribution Uniformity on the whole field when brand new?
- Does the system provide climate control?
- Water requirements.
 - What are the peak daily needs (acre-inches) for a normal year?
 - What is the system delivery capacity in 24 hours (acre-inches)?
 - What is the anticipated amount of water to be used per year (Acre-feet)
 - If the field has plants with different spacings, ages, or varieties, what is the recommended procedure to provide the appropriate amount of water per acre per week to each block?
- Energy consumption
 - Is it possible to pump all water during off-peak hours?
 - What are the pump and motor/engine efficiencies?
 - Are you provided with a pump curve showing the GPM and pressure?
 - What is the sensitivity of pump flow rates to well water level changes?
 - What is the energy cost per acre-foot?
- Filtration
 - Is filtration necessary, and if so, what type is provided?
- Chemical injection.
 - Are locally required backflow prevention and safety devices provided?
 - What is the capacity of the injector, in gallons per hour?
 - Can the equipment inject both fertilizers and other chemicals?
- Flow meter
 - Does it measure both flow rate (GPM) and volume (Acre-feet) applied?
 - Does installation follow manufacturer's recommendations with regard to lengths of straight pipe, pipe diameter, and straightening vanes?
- Pressure, air, and flushing
 - Are there adequate continuous air vents, vacuum relief valves, and flushouts?
 - What are the number, type, and size of pressure relief valves?
 - Is the pressure rating of all system components sufficiently high for the anticipated water temperature, surge pressures, and normal pressures?

Warranties

- Who provides equipment installation, start-up, and adjustment?
- What are warranties on individual component and "system" design performance?
- Who is providing warranties and what do the warranties cover and exclude?
- Are the providers financially capable of standing behind their warranties?
- What is the availability of replacement parts?
- Will you be provided with a packet containing manufacturers' literature, warranties, and operation instructions for the system?
- Is the irrigation dealer a "full service" dealer?

The Irrigation Consumer Bill of Rights was developed by:

Irrigation Training and Research Center (ITRC)
California Polytechnic State University (Cal Poly)
San Luis Obispo, CA 93407
ph: (805) 756-2434 FAX: (805) 756-2433

This program has been adopted by the Irrigation Dealers Association of California and by The Irrigation Association

Irrigation Consumer Bill of Rights™ **for Drip/Micro-Irrigation**

Note: This supplements the "General Irrigation Consumer Bill of Rights™". Discuss these items with your irrigation dealer before purchasing your irrigation system. The discussion will help you to make wiser selections of design options, and to appreciate the obligations of both yourself and the dealer in creating your irrigation system.

- Filtration
 - What is the equivalent mesh size?
 - How frequently will filter flushing be necessary, and how much water will be used per flush?
How will the flush water be disposed of?
 - Does this filter require pre-filtration?
 - What is the procedure for flushing (manual, automatic, take-apart?)
 - How is this filter protected from corrosion on both the inside and outside?
 - Does the pump provide enough water to flush the filter and operate the irrigation system simultaneously? Is a separate valve needed to sustain backflush pressure?
 - What are the initial adjustments necessary for the filter, and who will make them?
 - Through what variation in flow rate can the filter be effective?
 - Is a backup filter required? How will it be flushed, what are its mesh requirements, and where will it be located?
 - If a backflush flow adjustment is necessary, is it possible to view and sample the backflush water in order to make proper filter adjustments?
 - What is the safe operating pressure of the filter?
 - How much pressure loss is there through the filter when clean, and when dirty?
- Flow rates and pressures
 - What is the minimum pressure anticipated at any emitter?
 - What is the average emitter flow rate and pressure?
 - How are pressures regulated throughout the system?
 - Do pressure regulators require any adjustments?
- Chemical injection
 - What type of chemical injection is needed to minimize emitter plugging?
 - Has the water been tested for pH, iron, manganese, and sulfur bacteria problems?
 - What equipment components can be damaged by injected chemicals.
- General reduction of plugging
 - Is insect damage to emitters a problem in the area? How will the design alleviate that problem?
 - Are adequate flushouts provided throughout the whole system?
 - If used, can in-field filters and hose screen washers be easily cleaned?
- General agronomic
 - What percentage of the soil volume will be wet?
 - Are any chemical additives needed to minimize water runoff from the soil surface?

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