**Section 372.300 Equipment Design**

a) General Requirements

1) The design of all application systems shall provide facilities to assure uniform distribution of the treated wastewater over the disposal area.

2) Sufficient spare equipment and parts shall be available to assure continuity of application during application periods.

3) A single irrigation pumping unit may be utilized if a spare pump in working condition is available in dry storage.

4) The design shall provide for draining all pipes and equipment to prevent freeze damage.

b) Non-Spray Surface Application Systems

Non-spray surface application systems which provide for even distribution of wastewater effluent on the land site may be utilized, including ridge and furrow, gated pipe, or equivalent systems. These systems may be mobile or fixed on the site. They shall be designed to minimize clogging and to allow for ease of maintenance.

c) Spray Irrigation Systems

1) Spray Equipment

A) Fixed head systems and center pivot rigs may be utilized. A permanent connection point must be provided for each setting of moveable spray irrigation equipment. The design shall include provisions for shutting off the peripheral spray heads to prevent drift of spray beyond the application area under design wind conditions.

B) The irrigation system controls shall be simple and be protected from lightning damage.

C) The design maximum wind velocities shall be 15 MPH in urban and residential areas and 25 MPH in agricultural areas.

2) Nozzle Pressure Regulation

Regulation of nozzle pressure to compensate for field elevations and line losses shall be provided.